



# LED Catalogue

## LED & Electronics Application Technologies

# LED

Optosupply OPTOELECTRONICS PRODUCTS

Optosupply OPTOELECTRONICS PRODUCTS

Edition 17



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## About OptoSupply

We are a Hong Kong based LED manufacturer with our headquarter in Hong Kong and wholly owned factory located in Shenzhen of China. Owing the advance automatic machines and professional engineers. We strive to serve our worldwide customers with the full range of LED models at the most reasonable price vs. the highest brightness and the best quality and customer service.



Optosupply Limited

### Main Products:

- Through-Hole LED
- SMD LED
- Super Flux LED
- High Power LED
- LED Light Strip
- Digit Display & Dot Matrix
- OEM (original equipment manufacturing) Product
- ODM (original design manufacturing) Product

### Achievement:

- Renewed our website with new style in 2016
- Launched more new products into product line regularly during 2012-2016
- Introduced more technology and increased new equipments in 2011
- Increased two new super flux LED production lines and power LED production line in 2010
- Added two more SMD production lines in 2010
- Added assembly production line in 2009
- Added Plasma Cleaner for strengthening product quality in 2009
- Added a new SMD production line in 2009
- Got ISO9001: 2008 certification and ISO14001: 2004 certification in 2008
- Got REACH and SVHC certification in 2008
- Moved Hong Kong office to Fo Tan in 2006
- Got RoHS certification in 2005
- Expanded LED lamp production capacity to 2KK per day since 2004
- Expanded manufacturing floor space to 5,000 square meters in 2004
- Moved production plant to Longgang in 2004
- Obtained ISO9001: 2000 certification in 2003
- Founded in 2001 in Hong Kong



LED Plasma Cleaner

## Manufactory Technology

Through continuous research and development, **OptoSupply** pioneer applications for LEDs that create new value for our customers. The Group's dedicated R&D team is committed to developing innovative new applications for LED components. As **OptoSupply** engineers explore the immense untapped potential of LED technology, one of the Group's top priorities is to create new applications to make our customers' dreams become reality.

To achieve its goals, our R & D team focuses on three directions, namely materials, process and optics innovation. We strive to improve LED performance by deploying non-imaging optics technique, including ray tracing and LED light source optical modeling.

From deploying vertical integration to ensuring flexibility and speed, **OptoSupply** manufacturing facilities are engineered to meet the diverse needs of our customers and OEM partners worldwide.



LED Lamp Assembly

We have been improving our production processes and environment continuously. Our own in-house production lines are fully automated, key machines include wire and die bonding, auto encapsulation, auto Bin classification and tape & reel packaging which are imported from overseas. We undertake all the production processes in class 10K clean room with temperature, humidity and ESD control.

## Quality Control

**OptoSupply**'s devotion to quality control is never-ending. In addition to attaining ISO9001:2000 quality accreditation, **OptoSupply** has established its own independent Quality Engineering Centre, which comprises three individual laboratories:

- Reliability Test Lab
- Photometric Lab
- Failure Analysis Lab

These laboratories conduct a wide array of reliability tests-including tests for shock resistance, life span and thermal shock-to ensure that only the highest quality **OptoSupply** products are delivered to our valuable customers. **OptoSupply**'s quality assurance experts are devoted to achieving:

- Precision emission patterns
- High degree of color consistency
- High durability
- High reliability to withstand the temperature, humidity and ultraviolet
- Conditions of real outdoor environments



LED Lamp Bond Machine



Top View SMD Bin Sorter



LED Application Production Line

We continue to focus on the development of related LED products application in order to extend the company's production line. We have been improving our production processes and environment continuously. Our own In-house production lines are fully automated key machines, include Lead-Free N2 /AIR Reflow Soldering Machine and Automatic Lead-Free Dual Ware Soldering Machine.

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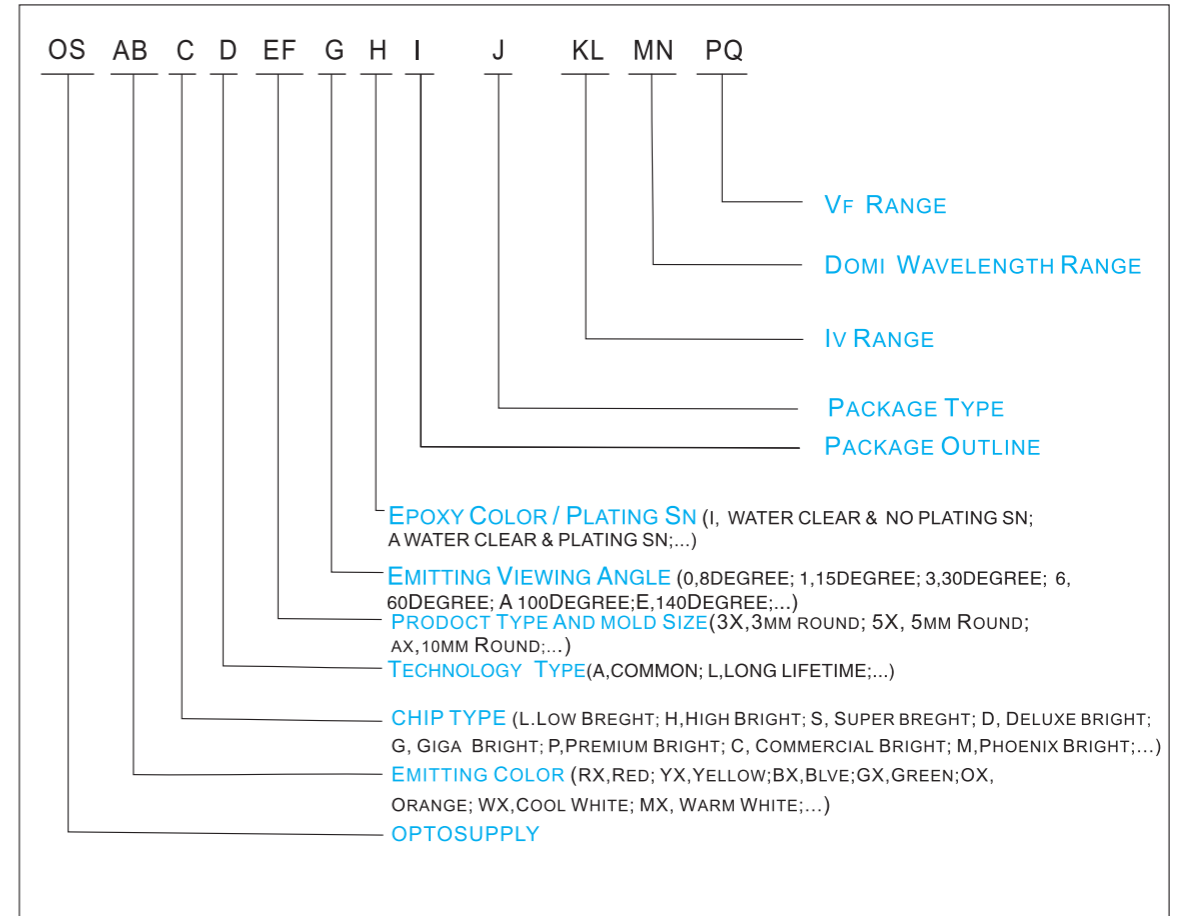
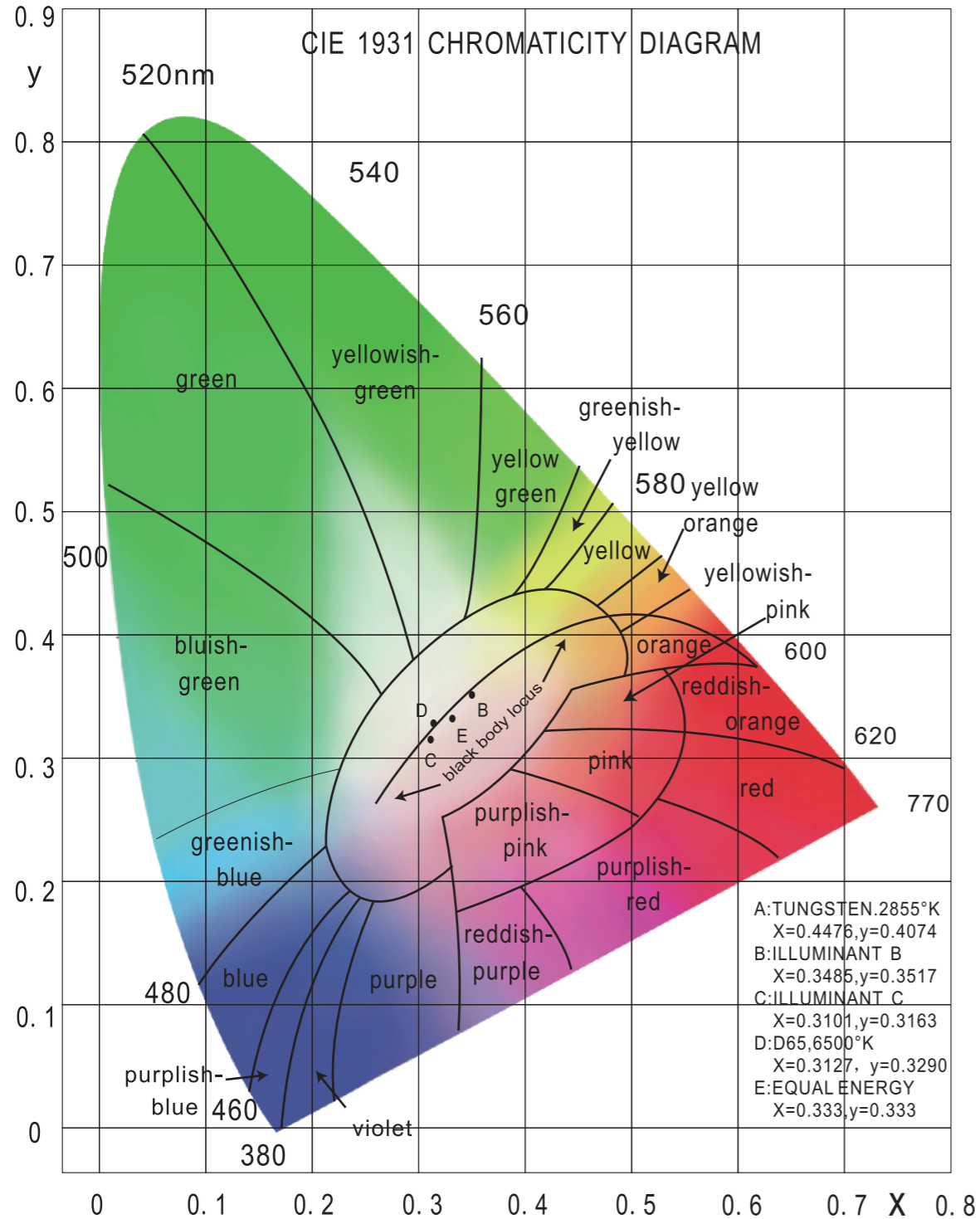
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This data shows typical values.



### Intensity Standard

Bin	Range (mcd)	Bin	Range (mcd)	Bin	Range (mcd)	Bin	Range (mcd)
A	1-20	I	330-500	Q	5800-7000	Z	25000-30000
B	20-30	J	500-700	R	7000-8400	3	30000-36000
C	30-45	K	750-1120	S	8400-10000	4	36000-43000
D	45-68	L	1120-1560	T	10000-12000	5	43000-50000
E	68-100	M	1560-2180	U	12000-14400	6	50000-60000
F	100-150	N	2180-3000	V	14400-18000	7	60000-72000
G	150-220	O	3000-4200	W	18000-22000	8	72000-85000
H	220-330	P	4200-5800	Y	22000-25000	9	85000-100000

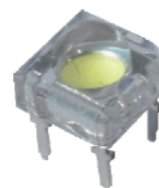
### Forward Voltage

Bin	Range (V)	Bin	Range (V)	Bin	Range (V)	Bin	Range (V)
11	<1.6	66	2.4-2.6	BB	3.4-3.6	GG	4.4-4.6
22	1.6-1.8	77	2.6-2.8	CC	3.6-3.8	HH	4.6-4.8
33	1.8-2.0	88	2.8-3.0	DD	3.8-4.0	II	4.8-5.0
44	2.0-2.2	99	3.0-3.2	EE	4.0-4.2	JJ	5.0-5.2
55	2.2-2.4	AA	3.2-3.4	FF	4.2-4.4	KK	5.2-5.4





Through-hole LED series



Super Flux LED series






SMD LED series



High Power LED series



# Current Regulative LED

Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Chromaticity Coordinates						
				x			y					
				Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
<b>Φ5 Round Type</b>												
	OSW5DK5A31A-CRLED18	●	Cool White	Water Clear	5.5	20	0.23	0.27	0.31	0.24	0.28	0.32
	OSMSDK5A31A-CRLED18	●	Warm White	Water Clear	5.5	20	0.41	0.45	0.49	0.37	0.41	0.45
<b>Φ8 Round Type</b>												
	OSW5DK8B31B-CRLED18	●	Cool White	Water Clear	5.5	20	0.23	0.27	0.31	0.24	0.28	0.32
	OSMSDK8B31B-CRLED18	●	Warm White	Water Clear	5.5	20	0.41	0.45	0.49	0.37	0.41	0.45
<b>Φ10 Round Type</b>												
	OSW5DKA131A-CRLED18	●	Cool White	Water Clear	5.5	20	0.23	0.27	0.31	0.24	0.28	0.32
	OSMSDKA131A-CRLED18	●	Warm White	Water Clear	5.5	20	0.41	0.45	0.49	0.37	0.41	0.45
Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Dominant Wavelength		wd(nm)				
				Min.		Max.		Min.				
				Typ.	Max.	Min.	Max.	Min.				
<b>Φ5 Round Type</b>												
	OSB5SA5A31A-CRLED18	●	Blue	Water Clear	5.5	20	465	470	475			
	OSG5DA5A31A-CRLED18	●	Pure Green	Water Clear	5.5	20	520	525	530			
	OSG8NU5A31A-CRLED18	●	Yellow Green	Water Clear	5	20	565	570	575			
	OSY5JA5A31A-CRLED18	●	Yellow	Water Clear	5	20	585	590	595			
	OSY5MA5A31A-CRLED18	●	Yellow	Water Clear	5	20	585	590	595			
	OSO5JA5A31A-CRLED18	●	Orange	Water Clear	5	20	600	605	610			
	OSR5JA5A31A-CRLED18	●	Red	Water Clear	5	20	620	625	630			
	OSR5MA5A31A-CRLED18	●	Red	Water Clear	5	20	620	625	630			
<b>Φ8 Round Type</b>												
	OSB5SA8B31B-CRLED18	●	Blue	Water Clear	5.5	20	465	470	475			
	OSG5DA8B31B-CRLED18	●	Pure Green	Water Clear	5.5	20	520	525	530			
	OSG8NU8B31B-CRLED18	●	Yellow Green	Water Clear	5	20	565	570	575			
	OSY5JA8B31B-CRLED18	●	Yellow	Water Clear	5	20	585	590	595			
	OSY5MA8B31B-CRLED18	●	Yellow	Water Clear	5	20	585	590	595			
	OSO5JA8B31B-CRLED18	●	Orange	Water Clear	5	20	600	605	610			
	OSR5JA8B31B-CRLED18	●	Red	Water Clear	5	20	620	625	630			
	OSR5MA8B31B-CRLED18	●	Red	Water Clear	5	20	620	625	630			
<b>Φ10 Round Type</b>												
	OSB5SAA131A-CRLED18	●	Blue	Water Clear	5.5	20	465	470	475			
	OSG5DAA131A-CRLED18	●	Pure Green	Water Clear	5.5	20	520	525	530			
	OSG8NUA131A-CRLED18	●	Yellow Green	Water Clear	5	20	565	570	575			
	OSY5JAA131A-CRLED18	●	Yellow	Water Clear	5	20	585	590	595			
	OSY5MAA131A-CRLED18	●	Yellow	Water Clear	5	20	585	590	595			
	OSO5JAA131A-CRLED18	●	Orange	Water Clear	5	20	600	605	610			
	OSR5JAA131A-CRLED18	●	Red	Water Clear	5	20	620	625	630			
	OSR5MAA131A-CRLED18	●	Red	Water Clear	5	20	620	625	630			

# Current Regulative LED

Luminous Intensity (mcd)	Directivity 2θ1/2 (degree)	IF (mA)			Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)				Mounting
		V <sub>F</sub> =12V					V <sub>F</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	
		Min.	Typ.	Max.							
12000	30	-	18	-	10	8	20	350	-30~+85	-40~+100	Wave Soldering
8000	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
12000	30	-	18	-	10	8	20	350	-30~+85	-40~+100	Wave Soldering
8000	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
12000	30	-	18	-	10	8	20	350	-30~+85	-40~+100	Wave Soldering
8000	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
Luminous Intensity (mcd)	Directivity 2θ1/2 (degree)	IF (mA)			Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)				Mounting
		V <sub>F</sub> =12V					V <sub>F</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	
		Min.	Typ.	Max.							
6500	30	-	18	-	10	8	20	350	-30~+85	-40~+100	Wave Soldering
12000	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
750	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
1800	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
7500	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
1800	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
1800	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
1800	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
7500	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
7500	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
6500	30	-	18	-	10	8	20	350	-30~+85	-40~+100	Wave Soldering
12000	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
750	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
1800	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
7500	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
1800	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
1800	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
1800	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
7500	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
7500	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
6500	30	-	18	-	10	8	20	350	-30~+85	-40~+100	Wave Soldering
12000	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
750	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
1800	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
7500	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
1800	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
1800	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
1800	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
7500	30	-	18	-	10	8	20	350	-30~+85	-40~+100	
7500	30	-	18	-	10	8	20	350	-30~+85	-40~+100	

# CRD and Voltage Detector LED

Package	Part Number	Lens Type	Constant Current(I <sub>H</sub> )				Turn-on Voltage(V <sub>k</sub> )			
			I <sub>H</sub>			Voltage (V)	V <sub>k</sub> (V)			
			Min.	Typ.	Max.					
<i>Current Regulative Diode(T092)</i>										
	OSCRDT218-A	Light Green Diffused	15	-	19	10	≤3.5			
	OSCRDT218-C	Light Blue Diffused	15	-	19	10	≤3.5			
<i>Current Regulative Diode(SMD2835)</i>										
	OSCRD2835-18	Water Clear Type	15	-	19	10	≤3.5			
Package	Part Number	Emitting Color		Lens Type	Forward Voltage (v)			Dominant Wavelength wd(nm)		
		Lower	Normal		Min.	Typ.	Max.	Min.	Typ.	
		<i>Φ5 Voltage Detector LED</i>								
	OSD127R55A1	■	-	Water Clear	2.55	2.7	2.85	620	625	
	OSD127R55A2	■	-	White Diffused	2.55	2.7	2.85	620	625	
	OSD129R55A1	■	-	Water Clear	2.75	2.9	3.05	620	625	
	OSD129R55A2	■	-	White Diffused	2.75	2.9	3.05	620	625	
	OSD133R55A1	■	-	Water Clear	3.15	3.3	3.45	620	625	
	OSD133R55A2	■	-	White Diffused	3.15	3.3	3.45	620	625	
	OSD136R55A1	■	-	Water Clear	3.45	3.6	3.75	620	625	
	OSD136R55A2	■	-	White Diffused	3.45	3.6	3.75	620	625	
	OSD139R55A1	■	-	Water Clear	3.75	3.9	4.05	620	625	
	OSD139R55A2	■	-	White Diffused	3.75	3.9	4.05	620	625	
	OSD142R55A1	■	-	Water Clear	4.05	4.2	4.35	620	625	
	OSD142R55A2	■	-	White Diffused	4.05	4.2	4.35	620	625	
		OSD233RP5A1	■	-	Water Clear	3.15	3.3	3.45	620	625
			-	■					520	525
OSD233RP5A2		■	-	White Diffused	3.15	3.3	3.45	620	625	
		-	■					520	525	
OSD236RP5A1		■	-	Water Clear	3.45	3.6	3.75	620	625	
		-	■					520	525	
OSD236RP5A2		■	-	White Diffused	3.45	3.6	3.75	620	625	
		-	■					520	525	
OSD239RP5A1		■	-	Water Clear	3.75	3.9	4.05	620	625	
		-	■					520	525	
OSD239RP5A2		■	-	White Diffused	3.75	3.9	4.05	620	625	
		-	■					520	525	
OSD242RP5A1	■	-	Water Clear	4.05	4.2	4.35	620	625		
	-	■					520	525		
OSD242RP5A2	■	-	White Diffused	4.05	4.2	4.35	620	625		
	-	■					520	525		

# CRD and Voltage Detector LED

Turn-on Voltage(V <sub>k</sub> )	Limiting Ratio(K <sub>c</sub> )	Withstand Voltage (V)	Absolute Maximum Rating (Ta=25°C)			Mounting					
			T <sub>j</sub> (°C)	T <sub>stg</sub> (°C)	P <sub>c</sub> (W)						
I <sub>K</sub> (MA)	I <sub>30V</sub> /I <sub>10V</sub>										
≤ 0.8I <sub>H</sub>	≤ 1.1	> 70	125	-40~+125	0.75*2	Wave Soldering					
≤ 0.8I <sub>H</sub>	≤ 1.1	> 70	125	-40~+125	0.75*2						
≤ 0.8I <sub>H</sub>	≤ 1.1	> 70	125	-40~+125	0.75	Reflow					
Max.	Luminous Intensity		Directivity 2θ1/2 (degree)	IF (mA)	Absolute Maximum Rating (Ta=25°C)					Mounting	
	Min.	Typ.			V <sub>cc</sub> (V)	I <sub>FP</sub> *1 (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)		T <sub>stg</sub> (°C)
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	Wave Soldering
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
630	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
530	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	
530	-	-	30	-	-0.3~+15	-	-	100	-30~+75	-40~+100	



Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Dominant Wavelength wd(nm)			Lumen Flux (lm)				
				Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.			
<b>Φ4.8 3-Chip Straw Type</b>													
	OSB56E56F1A	Blue	Water Clear	3.1	3.6	465	470	475	9	12			
	OSG58E56F1A	Pure Green	Water Clear	3.1	3.6	520	525	530	25	30			
	OSSYKE56F1A	Yellow	Water Clear	2.1	2.6	585	590	595	12	15			
	OSSRKE56F1A	Red	Water Clear	2.1	2.6	620	625	630	12	15			
Package	Part Number	Emitting Color	Lens Type	Forward Current IF (mA)		Chromaticity Coordinates						Luminous Intensity (mcd)	
				Typ.	Max.	x			y			Min.	Typ.
<b>Φ5 Round 5V Resistor Type</b>													
	OSW5DKA31A-5V	Cool White	Water Clear	12	20	0.23	0.27	0.31	0.24	0.28	0.32	3000	4200
	OSM5DKA31A-5V	Warm White	Water Clear	12	20	0.41	0.45	0.49	0.37	0.41	0.45	2180	3000
	OSK5DKA31A-5V	Pink	Water Clear	12	20	0.41	0.45	0.49	0.13	0.17	0.21	1120	1560
<b>Φ5 Round 12V Resistor Type</b>													
	OSW5DKA31A-12V	Cool White	Water Clear	10	15	0.23	0.27	0.31	0.24	0.28	0.32	3000	4200
	OSM5DKA31A-12V	Warm White	Water Clear	10	15	0.41	0.45	0.49	0.37	0.41	0.45	2180	3000
	OSK5DKA31A-12V	Pink	Water Clear	10	15	0.41	0.45	0.49	0.13	0.17	0.21	1120	1560
Package	Part Number	Emitting Color	Lens Type	Forward Current IF (mA)		Dominant Wavelength wd(nm)			Luminous Intensity (mcd)				
				Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.			
<b>Φ5 Round 5V Resistor Type</b>													
	OSB5SA31A-5V	Blue	Water Clear	12	20	465	470	475	1560	2180			
	OSG5DA31A-5V	Pure Green	Water Clear	12	20	520	525	530	3000	4200			
	OSG8HA31A-5V	Yellow Green	Water Clear	12	20	565	570	575	500	750			
	OSY5RU31A-5V	Yellow	Water Clear	12	20	585	590	595	1120	1560			
	OOS5JA31A-5V	Orange	Water Clear	12	20	600	605	610	1120	1560			
	OSR5RU31A-5V	Red	Water Clear	12	20	620	625	630	1120	1560			
<b>Φ5 Round 12V Resistor Type</b>													
	OSB5SA31A-12V	Blue	Water Clear	10	15	465	470	475	1560	2180			
	OSG5DA31A-12V	Pure Green	Water Clear	10	15	520	525	530	3000	4200			
	OSG8HA31A-12V	Yellow Green	Water Clear	10	15	565	570	575	500	750			
	OSY5RU31A-12V	Yellow	Water Clear	10	15	585	590	595	1120	1560			
	OOS5JA31A-12V	Orange	Water Clear	10	15	600	605	610	1120	1560			
	OSR5RU31A-12V	Red	Water Clear	10	15	620	625	630	1120	1560			
Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Chromaticity Coordinates							
				Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.		
<b>Φ8 3-Chip Premium Power LED</b>													
	OS4WM387E1U	Pure White	Water Clear	9.3	10.8	0.27	0.31	0.35	0.29	0.33	0.37		
	OSSWM387E1U	Cool White	Water Clear	9.3	10.8	0.23	0.27	0.31	0.24	0.28	0.32		
	OSSMM387E1U	Warm White	Water Clear	9.3	10.8	0.41	0.45	0.49	0.37	0.41	0.45		
Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Dominant Wavelength wd(nm)							
				Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.			
<b>Φ8 3-Chip Premium Power LED</b>													
	OS4BM387E1U	Blue	Water Clear	9.3	10.8	455	460	465	465				
	OSG58387E1U	Pure Green	Water Clear	9.3	10.8	520	525	530	530				
	OSSYE387E1U	Yellow	Water Clear	6.6	7.8	585	590	595	595				
	OSSOG387E1U	Orange	Water Clear	6.6	7.8	600	605	610	610				
	OSSRE387E1U	Red	Water Clear	6.6	7.8	620	625	630	630				

Directivity 201/2 (degree)	IF (mA)	Reverse Current IR Max. (uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting		
				IF (mA)	IFP (mA)	VR (V)	PD (mW)	Topr (°C)	Tstg (°C)			
150	90	30	5	90	150	5	324	-30~+85	-40~+100	Wave Soldering		
150	90	30	5	90	150	5	324	-30~+85	-40~+100			
150	90	30	5	100	150	5	260	-30~+85	-40~+100			
150	90	30	5	100	150	5	260	-30~+85	-40~+100			
Directivity 201/2 (degree)	VF (V)	Reverse Current IR Max. (uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting		
				VF (V)	IFP (mA)	VR (V)	PD (mW)	Topr (°C)	Tstg (°C)			
30	5	-	5	7.5	-	5	150	-30~+85	-40~+100	Wave Soldering		
30	5	-	5	7.5	-	5	150	-30~+85	-40~+100			
30	5	-	5	7.5	-	5	150	-30~+85	-40~+100			
Directivity 201/2 (degree)	VF (V)	Reverse Current IR Max. (uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting		
				VF (V)	IFP (mA)	VR (V)	PD (mW)	Topr (°C)	Tstg (°C)			
30	12	-	5	15	-	5	225	-30~+85	-40~+100	Wave Soldering		
30	12	-	5	15	-	5	225	-30~+85	-40~+100			
30	12	-	5	15	-	5	225	-30~+85	-40~+100			
Directivity 201/2 (degree)	VF (V)	Reverse Current IR Max. (uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting		
				VF (V)	IFP (mA)	VR (V)	PD (mW)	Topr (°C)	Tstg (°C)			
30	5	-	5	7.5	-	5	150	-30~+85	-40~+100	Wave Soldering		
30	5	-	5	7.5	-	5	150	-30~+85	-40~+100			
30	5	-	5	7.5	-	5	150	-30~+85	-40~+100			
30	5	-	5	7.5	-	5	150	-30~+85	-40~+100			
30	5	-	5	7.5	-	5	150	-30~+85	-40~+100			
30	5	-	5	7.5	-	5	150	-30~+85	-40~+100			
30	12	-	5	15	-	5	225	-30~+85	-40~+100	Wave Soldering		
30	12	-	5	15	-	5	225	-30~+85	-40~+100			
30	12	-	5	15	-	5	225	-30~+85	-40~+100			
30	12	-	5	15	-	5	225	-30~+85	-40~+100			
30	12	-	5	15	-	5	225	-30~+85	-40~+100			
30	12	-	5	15	-	5	225	-30~+85	-40~+100			
Lumen Flux (lm)		Directivity 201/2 (degree)	IF (mA)	Reverse Current IR Max. (uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
Min.	Typ.					IF (mA)	IFP (mA)	VR (V)	PD (mW)	Topr (°C)	Tstg (°C)	
45	55	140	40	10	15	45	80	15	486	-30~+85	-40~+100	Wave Soldering
40	50	140	40	10	15	45	80	15	486	-30~+85	-40~+100	
40	50	140	40	10	15	45	80	15	486	-30~+85	-40~+100	
Lumen Flux (lm)		Directivity 201/2 (degree)	IF (mA)	Reverse Current IR Max. (uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
Min.	Typ.					IF (mA)	IFP (mA)	VR (V)	PD (mW)	Topr (°C)	Tstg (°C)	
8	12	140	40	10	15	45	80	15	486	-30~+85	-40~+100	Wave Soldering
28	35	140	40	10	15	45	80	15	486	-30~+85	-40~+100	
15	20	140	50	10	15	50	90	15	390	-30~+85	-40~+100	
28	35	140	50	10	15	50	90	15	390	-30~+85	-40~+100	
15	20	140	50	10	15	50	90	15	390	-30~+85	-40~+100	

# Special Color LED Series

Picture	Part Number	Emitting Color		Package	Lens Type	Forward Voltage VF (V)		Chromaticity Coordinates			Lumen Flux (lm)		Directivity 2θ1/2 (degree)
						Typ.	Max.	x	y	Min.	Typ.		
												Typ.	
	OSC24L5111A	●	Sky	5mm	Water Clear	3.1	3.6	0.19	0.15	4.0	4.5	15	
	OSC24LZ281P	●	Sky	Super Flux	Water Clear	3.1	3.6	0.19	0.15	5.5	6.5	80	
	OSC24LS1C1A	●	Sky	3528	Green Diffused	3.1	3.6	0.19	0.15	4.0	4.5	120	
	OSC24TS4C1A	●	Sky	5050	Green Diffused	3.2	3.6	0.19	0.15	12	13.5	120	
	OSC34L5111A	●	Cyan	5mm	Water Clear	3.1	3.6	0.208	0.256	6	6.7	15	
	OSC34LZ281P	●	Cyan	Super Flux	Water Clear	3.1	3.6	0.208	0.256	8.5	9.5	80	
	OSC34LS1C1A	●	Cyan	3528	Green Diffused	3.1	3.6	0.208	0.256	6	6.7	120	
	OSC34TS4C1A	●	Cyan	5050	Green Diffused	3.2	3.6	0.208	0.256	18	20	120	
	OSC44L5111A	●	Aqua	5mm	Water Clear	3.1	3.6	0.25	0.37	8	8.6	15	
	OSC44LZ281P	●	Aqua	Super Flux	Water Clear	3.1	3.6	0.25	0.37	10	12	80	
	OSC44LS1C1A	●	Aqua	3528	Green Diffused	3.1	3.6	0.25	0.37	8	8.6	120	
	OSC44TS4C1A	●	Aqua	5050	Green Diffused	3.2	3.6	0.25	0.37	24	26	120	
	OSC54L5111A	●	Mint	5mm	Water Clear	3.1	3.6	0.29	0.49	8.5	9.2	15	
	OSC54LZ281P	●	Mint	Super Flux	Water Clear	3.1	3.6	0.29	0.49	11	13	80	
	OSC54LS1C1A	●	Mint	3528	Green Diffused	3.1	3.6	0.29	0.49	8.5	9.2	120	
	OSC54TS4C1A	●	Mint	5050	Green Diffused	3.2	3.6	0.29	0.49	25	27.5	120	
	OSC64L5111A	●	Lime	5mm	Water Clear	3.1	3.6	0.32	0.53	8.5	9.2	15	
	OSC64LZ281P	●	Lime	Super Flux	Water Clear	3.1	3.6	0.32	0.53	11	13	80	
	OSC64LS1C1A	●	Lime	3528	Green Diffused	3.1	3.6	0.32	0.53	8.5	9.2	120	
	OSC64TS4C1A	●	Lime	5050	Green Diffused	3.2	3.6	0.32	0.53	25	27.5	120	
	OSC74L5111A	●	Leaf	5mm	Water Clear	3.1	3.6	0.27	0.55	8.6	9.3	15	
	OSC74LZ281P	●	Leaf	Super Flux	Water Clear	3.1	3.6	0.27	0.55	11	13	80	
	OSC74LS1C1A	●	Leaf	3528	Green Diffused	3.1	3.6	0.27	0.55	8.6	9.3	120	
	OSC74TS4C1A	●	Leaf	5050	Green Diffused	3.2	3.6	0.27	0.55	25.5	28	120	
	OSC84L5111A	●	Baby Pink	5mm	Water Clear	3.1	3.6	0.356	0.208	3.5	4.1	15	
	OSC84LZ281P	●	Baby Pink	Super Flux	Water Clear	3.1	3.6	0.356	0.208	5	5.7	80	
	OSC84LS1C1A	●	Baby Pink	3528	Red Diffused	3.1	3.6	0.356	0.208	3.5	4.1	120	
	OSC84TS4C1A	●	Baby Pink	5050	Red Diffused	3.2	3.6	0.356	0.208	10	12	120	
	OSCA4L5111A	●	Magenta	5mm	Water Clear	3.1	3.6	0.45	0.25	3.3	3.8	15	
	OSCA4LZ281P	●	Magenta	Super Flux	Water Clear	3.1	3.6	0.45	0.25	5	5.5	80	
	OSCA4LS1C1A	●	Magenta	3528	Red Diffused	3.1	3.6	0.45	0.25	3.3	3.8	120	
	OSCA4TS4C1A	●	Magenta	5050	Red Diffused	3.2	3.6	0.45	0.25	9.5	11.5	120	
	OSCB4L5111A	●	Rose	5mm	Water Clear	3.1	3.6	0.51	0.285	1.8	2.2	15	
	OSCB4LZ281P	●	Rose	Super Flux	Water Clear	3.1	3.6	0.51	0.285	2.5	3	80	
	OSCB4LS1C1A	●	Rose	3528	Red Diffused	3.1	3.6	0.51	0.285	1.8	2.2	120	
	OSCB4TS4C1A	●	Rose	5050	Red Diffused	3.2	3.6	0.51	0.285	5.5	6.5	120	
	OSCC4L5111A	●	Tomato	5mm	Water Clear	3.1	3.6	0.59	0.315	1.5	1.8	15	
	OSCC4LZ281P	●	Tomato	Super Flux	Water Clear	3.1	3.6	0.59	0.315	2	2.5	80	
	OSCC4LS1C1A	●	Tomato	3528	Red Diffused	3.1	3.6	0.59	0.315	1.5	1.8	120	
	OSCC4TS4C1A	●	Tomato	5050	Red Diffused	3.2	3.6	0.59	0.315	4.5	5.5	120	
	OSCD4L5111A	●	Lavender	5mm	Water Clear	3.1	3.6	0.29	0.23	5	5.4	15	
	OSCD4LZ281P	●	Lavender	Super Flux	Water Clear	3.1	3.6	0.29	0.23	6.5	7.5	80	
	OSCD4LS1C1A	●	Lavender	3528	Yellow Diffused	3.1	3.6	0.29	0.23	5	5.4	120	
	OSCD4TS4C1A	●	Lavender	5050	Yellow Diffused	3.2	3.6	0.29	0.23	15	16.5	120	
	OSCE4L5111A	●	Peach	5mm	Water Clear	3.1	3.6	0.386	0.275	4.5	4.9	15	
	OSCE4LZ281P	●	Peach	Super Flux	Water Clear	3.1	3.6	0.386	0.275	6	7	80	
	OSCE4LS1C1A	●	Peach	3528	Yellow Diffused	3.1	3.6	0.386	0.275	4.5	4.9	120	
	OSCE4TS4C1A	●	Peach	5050	Yellow Diffused	3.2	3.6	0.386	0.275	13.5	15	120	
Picture	Part Number	Emitting Color		Package	Lens Type	Forward Voltage VF (V)		Dominant Wavelength wld(nm)			Luminous Intensity (mcd)		Directivity 2θ1/2 (degree)
						Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	
<i>Golden Color LED</i>													
	OSY6CA3131P	●	Golden	3mm	Water Clear	2.4	2.8	590	594	597	22000	25000	30
	OSY6CA5111P	●	Golden	5mm	Water Clear	2.4	2.8	590	594	597	40000	55000	15
	OSY6PA3131A	●	Golden	3mm	Water Clear	2.1	2.6	590	594	597	4200	5800	30
	OSY6PA5111A	●	Golden	5mm	Water Clear	2.1	2.6	590	594	597	14400	18000	15

# Special Color LED Series

IF (mA)	Reverse Current I <sub>R</sub> Max (uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
			I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
60	30	5	80	120	5	288	-30~+85	-40~+100	Reflow
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
60	30	5	80	120	5	288	-30~+85	-40~+100	Reflow
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
60	30	5	80	120	5	288	-30~+85	-40~+100	Reflow
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
60	30	5	80	120	5	288	-30~+85	-40~+100	Reflow
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
60	30	5	80	120	5	288	-30~+85	-40~+100	Reflow
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
60	30	5	80	120	5	288	-30~+85	-40~+100	Reflow
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
60	30	5	80	120	5	288	-30~+85	-40~+100	Reflow
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
60	30	5	80	120	5	288	-30~+85	-40~+100	Reflow
IF (mA)	Reverse Current I <sub>R</sub> Max (uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
			I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	
70	10	5	70	120	5	196	-30~+85	-40~+100	Wave Soldering
70	10	5	70	120	5	196	-30~+85	-40~+100	
20	10	5	50	120	5	130	-40~+85	-40~+100	
20	10	5	50	120	5	130	-40~+85	-40~+100	

# Special Color LED Series

Picture	Part Number	Emitting Color		Package	Lens Type	Forward Voltage VF (V)		Chromaticity Coordinates		Lumen Flux (Lm)		Directivity 2θ1/2 (degree)
						Typ.	Max.	Typ.	Typ.	Min.	Typ.	
	OSCF4L5111A	●	Cherry	5mm	Water Clear	3.1	3.6	0.44	0.30	4.2	4.7	15
	OSCF4LZ281P	●	Cherry	Super Flux	Water Clear	3.1	3.6	0.44	0.3	6.0	6.5	80
	OSCF4LS1C1A	●	Cherry	3528	Yellow Diffused	3.1	3.6	0.44	0.30	4.2	4.7	120
	OSCF4TS4C1A	●	Cherry	5050	Yellow Diffused	3.2	3.6	0.44	0.30	12.5	14.0	120
	OSCG4L5111A	●	Orange Peach	5mm	Water Clear	3.1	3.6	0.55	0.36	4.0	4.4	15
	OSCG4LZ281P	●	Orange Peach	Super Flux	Water Clear	3.1	3.6	0.55	0.36	5.7	6.2	80
	OSCG4LS1C1A	●	Orange Peach	3528	Yellow Diffused	3.1	3.6	0.55	0.36	4.0	4.4	120
	OSCG4TS4C1A	●	Orange Peach	5050	Yellow Diffused	3.2	3.6	0.55	0.36	12.0	13.5	120
	OSCH4L5111A	●	Cream	5mm	Water Clear	3.1	3.6	0.41	0.35	5.5	6.1	15
	OSCH4LZ281P	●	Cream	Super Flux	Water Clear	3.1	3.6	0.41	0.35	7.5	8.5	80
	OSCH4LS1C1A	●	Cream	3528	Yellow Diffused	3.1	3.6	0.41	0.35	5.5	6.1	120
	OSCH4TS4C1A	●	Cream	5050	Yellow Diffused	3.2	3.6	0.41	0.35	16.5	18.5	120
	OSCJ4L5111A	●	Sand	5mm	Water Clear	3.1	3.6	0.47	0.36	4.9	5.3	15
	OSCJ4LZ281P	●	Sand	Super Flux	Water Clear	3.1	3.6	0.47	0.36	7.0	7.5	80
	OSCJ4LS1C1A	●	Sand	3528	Yellow Diffused	3.1	3.6	0.47	0.36	4.9	5.3	120
	OSCJ4TS4C1A	●	Sand	5050	Yellow Diffused	3.2	3.6	0.47	0.36	14.5	16	120
	OSCK4L5111A	●	Sunshine	5mm	Water Clear	3.1	3.6	0.34	0.37	7.0	7.5	15
	OSCK4LZ281P	●	Sunshine	Super Flux	Water Clear	3.1	3.6	0.34	0.37	9.0	10.5	80
	OSCK4LS1C1A	●	Sunshine	3528	Yellow Diffused	3.1	3.6	0.34	0.37	7.0	7.5	120
	OSCK4TS4C1A	●	Sunshine	5050	Yellow Diffused	3.2	3.6	0.34	0.37	20	22.5	120
	OSCL4L5111A	●	Lemon	5mm	Water Clear	3.1	3.6	0.395	0.455	8.0	8.5	15
	OSCL4LZ281P	●	Lemon	Super Flux	Water Clear	3.1	3.6	0.395	0.455	10	12	80
	OSCL4LS1C1A	●	Lemon	3528	Yellow Diffused	3.1	3.6	0.395	0.455	8.0	8.5	120
	OSCL4TS4C1A	●	Lemon	5050	Yellow Diffused	3.2	3.6	0.395	0.455	23	25.5	120
	OSCM4L5111A	●	Yolk	5mm	Water Clear	3.1	3.6	0.45	0.47	7.7	8.2	15
	OSCM4LZ281P	●	Yolk	Super Flux	Water Clear	3.1	3.6	0.45	0.47	9.5	11.5	80
	OSCM4LS1C1A	●	Yolk	3528	Yellow Diffused	3.1	3.6	0.45	0.47	7.7	8.2	120
	OSCM4TS4C1A	●	Yolk	5050	Yellow Diffused	3.1	3.6	0.45	0.47	22	24.5	120
	OSK6L5111A	●	Sakura	5mm	Water Clear	3.1	3.6	0.25	0.14	2.5	3.5	15
	OSK6LZ281P	●	Sakura	Super Flux	Water Clear	3.1	3.6	0.25	0.14	4.0	5.0	80
	OSK6LS1C1A	●	Sakura	3528	Yellow Diffused	3.1	3.6	0.25	0.14	2.5	3.5	120
	OSK6TS4C1A	●	Sakura	5050	Yellow Diffused	3.1	3.6	0.25	0.14	9.0	11	120
	OSB6L5111A	●	Ice Blue	5mm	Water Clear	3.1	3.6	0.19	0.29	6.2	7.0	15
	OSB6LZ281P	●	Ice Blue	Super Flux	Water Clear	3.1	3.6	0.19	0.29	8.0	10	80
	OSB6LS1C1A	●	Ice Blue	3528	Green Diffused	3.1	3.6	0.19	0.29	6.2	7.0	120
	OSB6TS4C1A	●	Ice Blue	5050	Green Diffused	3.2	3.6	0.19	0.29	18	21	120
	OSG7L5111A	●	Fluorescent Green	5mm	Water Clear	3.1	3.6	0.35	0.50	6.5	7.5	15
	OSG7LZ281P	●	Fluorescent Green	Super Flux	Water Clear	3.1	3.6	0.35	0.50	9.0	10.5	80
	OSG7LS1C1A	●	Fluorescent Green	3528	Green Diffused	3.1	3.6	0.35	0.50	6.5	7.5	120
	OSG7TS4C1A	●	Fluorescent Green	5050	Green Diffused	3.1	3.6	0.35	0.50	18	21	120

# Special Color LED Series

IF (mA)	Reverse Current I <sub>R</sub> Max. (uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
			I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
60	30	5	80	120	5	288	-30~+85	-40~+100	Reflow
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
60	30	5	80	120	5	288	-30~+85	-40~+100	Reflow
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
60	30	5	80	120	5	288	-30~+85	-40~+100	Reflow
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
60	30	5	80	120	5	288	-30~+85	-40~+100	Reflow
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
60	30	5	80	120	5	288	-30~+85	-40~+100	Reflow
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
60	30	5	80	120	5	288	-30~+85	-40~+100	Reflow









# Special LED Series

Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Chromaticity Coordinates						Lumen Flux (Lm)		Directivity 2θ1/2 (degree)
				Typ.	Max.	x			y			Min.	Typ.	
						Min.	Typ.	Max.	Min.	Typ.	Max.			
<i>Φ 4.8 Straw 9V LED</i>														
	OS5MPL56D1A	● Warm White	Water Clear	8.9	10.2	0.30	0.44	0.48	0.37	0.41	0.45	20	22	130
	OS4WPL56D1A	● Pure White	Water Clear	8.9	10.2	0.27	0.31	0.35	0.29	0.33	0.37	22	25	130
<i>Φ 5 Violet Round Type</i>														
	OSV5DL5111A	● Violet	Water Clear	3.1	3.6	400	405	410	12	14	15			
	OSV4DL5111A	● Violet	Water Clear	3.2	3.8	390	395	400	12	14	15			
<i>Φ 5 Violet Bullet Type</i>														
	OSV5DL5201A	● Violet	Water Clear	3.1	3.6	400	405	410	12	14	8			
	OSV4DL5201A	● Violet	Water Clear	3.2	3.8	390	395	400	12	14	8			
<i>Violet Oval Type</i>														
	OSV5DL5471D	● Violet	Water Clear	3.1	3.6	400	405	410	12	14	70/40			
	OSV4DL5471D	● Violet	Water Clear	3.2	3.8	390	395	400	12	14	70/40			
<i>Violet SMD 3528 Type</i>														
	OSV5DLS1C1A	● Violet	Water Clear	3.1	3.6	400	405	410	12	14	120			
	OSV4DLS1C1A	● Violet	Water Clear	3.2	3.8	390	395	400	12	14	120			
<i>Φ 5 Infrared Emitting Round Type</i>														
	OSI3CA5111A	● Infrared	Water Clear	1.6	1.8	~	850	~	30	45	15			
	OSI5LA5113A	● Infrared	Color Transparent	1.6	1.8	~	940	~	35	45	15			
<i>Φ 5 Infrared Emitting Bullet Type</i>														
	OSI3CA5201A	● Infrared	Water Clear	1.6	1.8	~	850	~	65	100	8			
	OSI5LA5203A	● Infrared	Color Transparent	1.6	1.8	~	940	~	45	60	8			
<i>Infrared Emitting Oval Type</i>														
	OSI3CA5451B	● Infrared	Water Clear	1.6	1.8	~	850	~	30	45	70/40			
	OSI5LA5453B	● Infrared	Color Transparent	1.6	1.8	~	940	~	25	35	70/40			
<i>Infrared Emitting SMD 3528 / Xenon Power Type</i>														
	OSI3CAS1C1A	● Infrared	Water Clear	1.6	1.8	~	850	~	15	20	120			
	OSI5LAS1C1A	● Infrared	Water Clear	1.6	1.8	~	940	~	10	20	120			
	OSI5XNE3C1E	● Infrared	Water Clear	1.8	2.6	~	940	~	280mW	300mW	120			
<i>Φ 5 Plant Growing LED</i>														
	OSR7CA5111A	● Red	Water Clear	2.1	2.6	650	660	670	12000	14400	15			
<i>Φ 4.8 Plant Growing LED</i>														
	OSR7CA56A1A	● Red	Water Clear	2.1	2.6	650	660	670	1120	1560	100			
<i>3528 Plant Growing LED</i>														
	OSR7CAS1C1A	● Red	Water Clear	2.1	2.6	650	660	670	500	700	120			
<i>Plant Growing Xenon Power LED</i>														
	OSR7XNE3C1E	● Red	Water Clear	2.8	3.5	650	660	670	450	480	120			
	OSR9XNE3C1E	● Red	Water Clear	2.8	3.5	720	730	740	280	300	120			

# Special LED Series

IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
			I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	
20	10	15	25	120	15	255	-30~+85	-40~+100	Wave Soldering
20	10	15	25	120	15	255	-30~+85	-40~+100	
<i>Φ 5 Violet Round Type</i>									
20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
20	10	5	30	100	5	114	-30~+85	-40~+100	
20	10	5	30	100	5	108	-30~+85	-40~+100	
20	10	5	30	100	5	114	-30~+85	-40~+100	
20	10	5	30	100	5	108	-30~+85	-40~+100	
20	10	5	30	100	5	114	-30~+85	-40~+100	
<i>Violet SMD 3528 Type</i>									
20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
20	10	5	30	100	5	114	-30~+85	-40~+100	
<i>Φ 5 Infrared Emitting Round Type</i>									
50	10	5	70	700	5	126	-30~+85	-40~+100	Wave Soldering
100	10	5	100	1000	5	180	-30~+85	-40~+100	
100	10	5	100	1000	5	180	-30~+85	-40~+100	
100	10	5	100	1000	5	180	-30~+85	-40~+100	
100	10	5	100	1000	5	180	-30~+85	-40~+100	
100	10	5	100	1000	5	180	-30~+85	-40~+100	
<i>Infrared SMD 3528 / Xenon Power Type</i>									
50	10	5	70	700	5	126	-30~+85	-40~+100	Reflow
100	10	5	100	1000	5	180	-30~+85	-40~+100	
700	10	5	1000	2000	5	2600	-30~+85	-40~+100	
<i>Φ 5 Plant Growing LED</i>									
20	10	5	50	120	5	130	-30~+85	-40~+100	Wave Soldering
<i>Φ 4.8 Plant Growing LED</i>									
20	10	5	70	120	5	182	-30~+85	-40~+100	Wave Soldering
<i>3528 Plant Growing LED</i>									
20	10	5	70	120	5	182	-30~+85	-40~+100	Reflow
<i>Plant Growing Xenon Power LED</i>									
700	10	5	700	1000	5	2450	-30~+85	-40~+100	Reflow
700	10	5	700	1000	5	2450	-30~+85	-40~+100	










# Special LED Series


Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Chromaticity Coordinates						CRI	
				Typ.	Max.	x			y				
						Min.	Typ.	Max.	Min.	Typ.	Max.		
<i>High CRI <math>\Phi</math> 4.8 Straw LED</i>													
	O5MFL56C1A-HCRI	●	Warm White	Water Clear	3.1	3.6	0.39	0.42	0.45	0.34	0.37	0.40	90
	OSM54E56C1A-HCRI	●	Warm White	Water Clear	3.1	3.6	0.39	0.42	0.45	0.34	0.37	0.40	90
	OSAWFL56C1A-HCRI	●	Pure White	Water Clear	3.1	3.6	0.28	0.31	0.34	0.27	0.30	0.33	85
	OSWA4E56C1A-HCRI	●	Pure White	Water Clear	3.1	3.6	0.28	0.31	0.34	0.27	0.30	0.33	85
	OSWR4356D1A	●	Pure White	Water Clear	8.5	9.6	0.28	0.32	0.36	0.27	0.31	0.35	92
	OSMR4356D1A	●	Warm White	Water Clear	8.5	9.6	0.40	0.44	0.48	0.34	0.38	0.42	90
<i>High CRI <math>\Phi</math> 5 Super Flux LED</i>													
	O5MFLZ2C1P-HCRI	●	Warm White	Water Clear	3.1	3.6	0.39	0.42	0.45	0.34	0.37	0.40	90
	OSM54E2Z2C1P-HCRI	●	Warm White	Water Clear	3.1	3.6	0.39	0.42	0.45	0.34	0.37	0.40	90
	OSAWFLZ2C1P-HCRI	●	Pure White	Water Clear	3.1	3.6	0.28	0.31	0.34	0.27	0.30	0.33	85
	OSWA4EZ2C1P-HCRI	●	Pure White	Water Clear	3.1	3.6	0.28	0.31	0.34	0.27	0.30	0.33	85
	OSWR43Z2C1P	●	Pure White	Water Clear	8.5	9.6	0.28	0.32	0.36	0.27	0.31	0.35	90
	OSMR43Z2C1P	●	Warm White	Water Clear	8.5	9.6	0.40	0.44	0.48	0.34	0.38	0.42	90
<i>4-chip DC 12V LED</i>													
	OSW4G456F1A	●	Pure White	Water Clear	12.0	13.6	0.27	0.31	0.35	0.29	0.33	0.37	75
	OSW4G4Z2C1P	●	Pure White	Water Clear	12.0	13.6	0.27	0.31	0.35	0.29	0.33	0.37	75
<i>DC 20V LED</i>													
	OS4WNL56F1A	●	Pure White	Water Clear	17.5	20	0.27	0.31	0.35	0.29	0.33	0.37	75
	OS4WNLZ2C1P	●	Pure White	Water Clear	17.5	20	0.27	0.31	0.35	0.29	0.33	0.37	75
	OS4WNN1E1E	●	Pure White	Water Clear	20.0	22	0.27	0.31	0.35	0.29	0.33	0.37	75
Package	Part Number	Emitting Color	Lens Type	Voltage VF (V)		Chromaticity Coordinates							
	<i><math>\Phi</math> 3 AC LED</i>												
	OSWY23131E	●	Cool White	Water Clear	3.1	3.6	0.23	0.27	0.31	0.24	0.28	0.32	
		OSMMY23131E	●	Warm White									Water Clear
<i><math>\Phi</math> 5 AC LED</i>													
	OSWY25111E	●	Cool White	Water Clear	3.1	3.6	0.23	0.27	0.31	0.24	0.28	0.32	
		OSMMY25111E	●	Warm White									Water Clear
Package	Part Number	Emitting Color	Lens Type	Voltage VF (V)		Dominant Wavelength wd(nm)							
	<i><math>\Phi</math> 3 AC LED</i>												
	OSBBY23131E	●	Blue	Water Clear	3.1	3.6	465	470	475				
		OSGGD23131E	●	Pure Green						Water Clear	520	525	530
	OSRRJ23131A	●	Red	Water Clear	2.1	2.6	620	625	630				
		OSYYJ23131A	●	Yellow						Water Clear	585	590	595
	OSOOJ23131A	●	Orange	Water Clear	2.1	2.6	600	605	610				
<i><math>\Phi</math> 5 AC LED</i>													
	OSBBY25111E	●	Blue	Water Clear	3.1	3.6	465	470	475				
		OSGGD25111E	●	Pure Green						Water Clear	520	525	530
	OSRRJ25111A	●	Red	Water Clear	2.1	2.6	620	625	630				
		OSYYJ25111A	●	Yellow						Water Clear	585	590	595
	OSOOJ25111A	●	Orange	Water Clear	2.1	2.6	600	605	610				

# Special LED Series

Luminous Flux (lm)	Directivity $\gamma$ 2 $\theta$ 1/2 (degree)	IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting	
					I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>sig</sub> (°C)		
					Min.	Typ.	Min.	Typ.	Max.	Min.		Typ.
16	18	120	50	10	5	60	120	5	216	-30~+85	-40~+100	Wave Soldering
14	16	120	60	30	5	75	120	5	270	-30~+85	-40~+100	
18	20	120	50	10	5	60	120	5	216	-30~+85	-40~+100	
15	17	120	60	30	5	75	120	5	270	-30~+85	-40~+100	
14	16	130	20	10	15	25	50	15	240	-30~+85	-40~+100	
10	12	130	20	10	15	25	50	15	240	-30~+85	-40~+100	
16	18	120	50	10	5	60	120	5	216	-30~+85	-40~+100	Wave Soldering
22	24	120	90	30	5	90	120	5	324	-30~+85	-40~+100	
18	20	120	50	10	5	60	120	5	216	-30~+85	-40~+100	
25	27	120	90	30	5	90	120	5	324	-30~+85	-40~+100	
14	16	120	20	10	15	30	50	15	288	-30~+85	-40~+100	
10	12	120	20	10	15	30	50	15	288	-30~+85	-40~+100	
28	30	150	20	10	15	20	40	15	272	-30~+85	40~+100	Wave Soldering
28	30	120	20	10	15	20	40	15	272	-30~+85	40~+100	
25	30	150	10	10	25	10	40	25	200	-30~+85	40~+100	Wave Soldering
25	30	120	10	10	25	12	40	25	240	-30~+85	40~+100	
60	75	140	30	10	25	30	50	25	660	-30~+85	40~+100	
Luminous Intensity (mcd)	Directivity $\gamma$ 2 $\theta$ 1/2 (degree)	IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting	
Min.	Typ.	Min.	Typ.	Max.	I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>sig</sub> (°C)		
					Min.	Typ.	Min.	Typ.	Max.	Min.		Typ.
2560	3000	30	20	-	-	30	100	-	108	-30~+85	-40~+100	Wave Soldering
1800	2560	30	20	-	-	30	100	-	108	-30~+85	-40~+100	
8000	10000	15	20	-	-	30	100	-	108	-30~+85	-40~+100	Wave Soldering
6500	8000	15	20	-	-	30	100	-	108	-30~+85	-40~+100	
Luminous Intensity (mcd)	Directivity $\gamma$ 2 $\theta$ 1/2 (degree)	IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting	
Min.	Typ.	Min.	Typ.	Max.	I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>sig</sub> (°C)		
					Min.	Typ.	Min.	Typ.	Max.	Min.		Typ.
2180	3000	30	20	-	-	30	100	-	108	-30~+85	-40~+100	Wave Soldering
8400	10000	30	20	-	-	30	100	-	108	-30~+85	-40~+100	
1120	1560	30	20	-	-	30	100	-	78	-30~+85	-40~+100	
1120	1560	30	20	-	-	30	100	-	78	-30~+85	-40~+100	
1120	1560	30	20	-	-	30	100	-	78	-30~+85	-40~+100	
1120	1560	30	20	-	-	30	100	-	78	-30~+85	-40~+100	
4200	5800	15	20	-	-	30	100	-	108	-30~+85	-40~+100	Wave Soldering
18000	22000	15	20	-	-	30	100	-	108	-30~+85	-40~+100	
4200	5800	15	20	-	-	30	100	-	78	-30~+85	-40~+100	
4200	5800	15	20	-	-	30	100	-	78	-30~+85	-40~+100	
4200	5800	15	20	-	-	30	100	-	78	-30~+85	-40~+100	
4200	5800	15	20	-	-	30	100	-	78	-30~+85	-40~+100	

# Through-hole LED Series

Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Chromaticity Coordinates				
				Typ.	Max.	x			Min.	
						Min.	Typ.	Max.		
<i>Φ4.8 3-Chip Straw Type</i>										
	OSW44356F1A	●	Pure White	Water Clear	9.3	10.8	0.27	0.31	0.35	0.29
	OSW54356F1A	●	Cool White	Water Clear	9.3	10.8	0.23	0.27	0.31	0.24
	OSM54356F1A	●	Warm White	Water Clear	9.3	10.8	0.41	0.45	0.49	0.37
	OSW44E56F1A	●	Pure White	Water Clear	3.1	3.6	0.27	0.31	0.35	0.29
	OSW54E56F1A	●	Cool White	Water Clear	3.1	3.6	0.23	0.27	0.31	0.24
	OSM54E56F1A	●	Warm White	Water Clear	3.1	3.6	0.41	0.45	0.49	0.37
<i>Φ5 Deluxe Power Round Type</i>										
	OSW54L5111P	●	Cool White	Water Clear	3.3	3.8	0.23	0.27	0.31	0.24
	OSM54L5111P	●	Warm White	Water Clear	3.3	3.8	0.41	0.45	0.49	0.37
	OSK54L5111P	●	Pink	Water Clear	3.3	3.8	0.41	0.45	0.49	0.13
<i>Φ3 Round Low Decay Type</i>										
	OSW54K3131E	●	Cool White	Water Clear	3.1	3.6	0.23	0.27	0.31	0.24
	OSM54K3131E	●	Warm White	Water Clear	3.1	3.6	0.41	0.45	0.49	0.37
	OSK54K3131E	●	Pink	Water Clear	3.1	3.6	0.41	0.45	0.49	0.13
<i>Φ5 Round Low Decay Type</i>										
	OSW54K5111E	●	Cool White	Water Clear	3.1	3.6	0.23	0.27	0.31	0.24
	OSM54K5111E	●	Warm White	Water Clear	3.1	3.6	0.41	0.45	0.49	0.37
	OSK54K5111E	●	Pink	Water Clear	3.1	3.6	0.41	0.45	0.49	0.13
<i>Φ5 Bullet Low Decay Type</i>										
	OSW5DK5201E	●	Cool White	Water Clear	3.1	3.6	0.23	0.27	0.31	0.24
	OSM5DK5201E	●	Warm White	Water Clear	3.1	3.6	0.41	0.45	0.49	0.37
	OSK5DK5201E	●	Pink	Water Clear	3.1	3.6	0.41	0.45	0.49	0.13
<i>Φ4.8 Straw Low Decay Type</i>										
	OSW54K56A1E	●	Cool White	Water Clear	3.1	3.6	0.23	0.27	0.31	0.24
	OSM54K56A1E	●	Warm White	Water Clear	3.1	3.6	0.41	0.45	0.49	0.37
	OSK54K56A1E	●	Pink	Water Clear	3.1	3.6	0.41	0.45	0.49	0.13
<i>Φ10 Round Low Decay Type</i>										
	OSW54KA131A	●	Cool White	Water Clear	3.1	3.6	0.23	0.27	0.31	0.24
	OSM54KA131A	●	Warm White	Water Clear	3.1	3.6	0.41	0.45	0.49	0.37
	OSK54KA131A	●	Pink	Water Clear	3.1	3.6	0.41	0.45	0.49	0.13
<i>2x3x4mm Rectangular Low Decay Type</i>										
	OSW54K7BA1F	●	Cool White	Water Clear	3.1	3.6	0.23	0.27	0.31	0.24
	OSM54K7BA1F	●	Warm White	Water Clear	3.1	3.6	0.41	0.45	0.49	0.37
	OSK54K7BA1F	●	Pink	Water Clear	3.1	3.6	0.41	0.45	0.49	0.13
<i>2x5x7mm Rectangular Low Decay Type</i>										
	OSW54K71A1F	●	Cool White	Water Clear	3.1	3.6	0.23	0.27	0.31	0.24
	OSM54K71A1F	●	Warm White	Water Clear	3.1	3.6	0.41	0.45	0.49	0.37
	OSK54K71A1F	●	Pink	Water Clear	3.1	3.6	0.41	0.45	0.49	0.13

Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Dominant Wavelength wd(nm)			
				Typ.	Max.	Min.	Typ.	Max.	
									<i>Φ5 Deluxe Power Round Type</i>
	OSB56L5111P	●	Blue	Water Clear	3.3	3.8	465	470	475
	OSG38A5111P	●	Bluish Green	Water Clear	3.3	3.8	500	505	510
	OSG58A5111P	●	Pure Green	Water Clear	3.3	3.8	520	525	530
	OSR5CA5111P	●	Red	Water Clear	2.2	2.6	620	625	630
	OSY5CA5111P	●	Yellow	Water Clear	2.2	2.6	585	590	595
	OSO5CA5111P	●	Orange	Water Clear	2.2	2.6	600	605	610
	OS5RKA5111P	●	Red	Water Clear	2.5	2.9	620	625	630
	OS5YKA5111P	●	Yellow	Water Clear	2.5	2.9	585	590	595

# Through-hole LED Series









Typ	Max.	Luminous Intensity (mcd)		Directivity 2θ1/2 (degree)	IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
		Min.	Typ.					I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	
0.33	0.37	5000	7000	150	20	10	15	25	50	15	270	-30~+85	-40~+100	Wave Soldering
0.28	0.32	6000	8400	150	20	10	15	25	50	15	270	-30~+85	-40~+100	
0.41	0.45	4000	5600	150	20	10	15	25	50	15	270	-30~+85	-40~+100	
0.33	0.37	5000	7000	150	60	30	5	75	120	5	270	-30~+85	-40~+100	
0.28	0.32	6000	8400	150	60	30	5	75	120	5	270	-30~+85	-40~+100	
0.41	0.45	4000	5600	150	60	30	5	75	120	5	270	-30~+85	-40~+100	
0.28	0.32	60000	75000	15	50	10	5	50	100	5	190	-30~+85	-40~+100	Wave Soldering
0.41	0.45	36000	42000	15	50	10	5	50	100	5	190	-30~+85	-40~+100	
0.17	0.21	10000	12000	15	50	10	5	50	100	5	190	-30~+85	-40~+100	
0.28	0.32	20000	22000	30	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
0.41	0.45	12000	14400	30	20	10	5	30	100	5	108	-30~+85	-40~+100	
0.17	0.21	2180	3000	30	20	10	5	30	100	5	108	-30~+85	-40~+100	
0.28	0.32	37000	42000	15	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
0.41	0.45	22000	25000	15	20	10	5	30	100	5	108	-30~+85	-40~+100	
0.17	0.21	7000	8400	15	20	10	5	30	100	5	108	-30~+85	-40~+100	
0.28	0.32	30000	40000	8	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
0.41	0.45	20000	30000	8	20	10	5	30	100	5	108	-30~+85	-40~+100	
0.17	0.21	7000	8400	8	20	10	5	30	100	5	108	-30~+85	-40~+100	
0.28	0.32	3000	4200	100	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
0.41	0.45	2180	3000	100	20	10	5	30	100	5	108	-30~+85	-40~+100	
0.17	0.21	750	1120	100	20	10	5	30	100	5	108	-30~+85	-40~+100	
0.28	0.32	35000	40000	30	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
0.41	0.45	18000	22000	30	20	10	5	30	100	5	108	-30~+85	-40~+100	
0.17	0.21	4200	5800	30	20	10	5	30	100	5	108	-30~+85	-40~+100	
0.28	0.32	1120	1560	100	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
0.41	0.45	500	750	100	20	10	5	30	100	5	108	-30~+85	-40~+100	
0.17	0.21	100	150	100	20	10	5	30	100	5	108	-30~+85	-40~+100	
0.28	0.32	2180	3000	100	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
0.41	0.45	1120	1560	100	20	10	5	30	100	5	108	-30~+85	-40~+100	
0.17	0.21	330	500	100	20	10	5	30	100	5	108	-30~+85	-40~+100	

Min.	Typ.	Luminous Intensity (mcd)	Directivity 2θ1/2 (degree)	IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
							I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	
25000	30000	15	30	10	5	50	100	5	190	-30~+85	-40~+100	Wave Soldering	
80000	100000	15	50	10	5	50	100	5	190	-30~+85	-40~+100		
80000	100000	15	50	10	5	50	100	5	190	-30~+85	-40~+100		
40000	55000	15	70	10	5	70	120	5	182	-30~+85	-40~+100		
40000	55000	15	70	10	5	70	120	5	182	-30~+85	-40~+100		
40000	55000	15	70	10	5	70	120	5	182	-30~+85	-40~+100		
80000	100000	15	70	10	5	70	120	5	182	-30~+85	-40~+100		
80000	100000	15	70	10	5	70	120	5	182	-30~+85	-40~+100		



Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Dominant Wavelength wd(nm)			
				Typ.	Max.	Min.	Typ.	Max.	
<i>Deluxe Power <math>\Phi</math> 5mm Traffic LED Series</i>									
	OSG38A5C31P		Bluish Green	Water Clear	3.1	3.6	500	505	510
	OSR5CA5C31P		Red	Water Clear	2.1	2.6	620	625	630
	OSY5CA5C31P		Yellow	Water Clear	2.1	2.6	585	590	595
<i><math>\Phi</math>5 Traffic LED Series</i>									
	OSG3DA5C31C		Bluish Green	Water Clear	3.1	3.6	500	505	510
	OSR5PA5C31C		Red	Water Clear	2.1	2.6	620	625	630
	OSY5PA5C31C		Yellow	Water Clear	2.1	2.6	585	590	595
<i><math>\Phi</math>3 Round Type</i>									
	OSB5SA3131E		Blue	Water Clear	3.1	3.6	465	470	475
	OSG5DA3131E		Pure Green	Water Clear	3.1	3.6	520	525	530
	OSR5PA3131E		Red	Water Clear	2.1	2.6	620	625	630
	OSY5PA3131E		Yellow	Water Clear	2.1	2.6	585	590	595
	OSO5PA3131E		Orange	Water Clear	2.1	2.6	600	605	610
	OSSRKA3131E		Red	Water Clear	2.1	2.6	620	625	630
	OSSYKA3131E		Yellow	Water Clear	2.1	2.6	585	590	595
<i><math>\Phi</math>5 Round Type</i>									
	OSB5SA5111E		Blue	Water Clear	3.1	3.6	465	470	475
	OSG5DA5111E		Pure Green	Water Clear	3.1	3.6	520	525	530
	OSR5PA5111E		Red	Water Clear	2.1	2.6	620	625	630
	OSY5PA5111E		Yellow	Water Clear	2.1	2.6	585	590	595
	OSO5PA5111E		Orange	Water Clear	2.1	2.6	600	605	610
	OSSRKA5111E		Red	Water Clear	2.1	2.6	620	625	630
	OSSYKA5111E		Yellow	Water Clear	2.1	2.6	585	590	595
<i><math>\Phi</math>5 Bullet Type</i>									
	OSB5SA5201E		Blue	Water Clear	3.1	3.6	465	470	475
	OSG5DA5201E		Pure Green	Water Clear	3.1	3.6	520	525	530
	OSR5PA5201E		Red	Water Clear	2.1	2.6	620	625	630
	OSY5PA5201E		Yellow	Water Clear	2.1	2.6	585	590	595
	OSO5PA5201E		Orange	Water Clear	2.1	2.6	600	605	610
<i><math>\Phi</math>4.8 Straw Type</i>									
	OSB5SA56A1E		Blue	Water Clear	3.1	3.6	465	470	475
	OSG5DA56A1E		Pure Green	Water Clear	3.1	3.6	520	525	530
	OSR5PA56A1E		Red	Water Clear	2.1	2.6	620	625	630
	OSY5PA56A1E		Yellow	Water Clear	2.1	2.6	585	590	595
	OSO5PA56A1E		Orange	Water Clear	2.1	2.6	600	605	610
<i><math>\Phi</math>10 Round Type</i>									
	OSB5SAA131A		Blue	Water Clear	3.1	3.6	465	470	475
	OSG5DAA131A		Pure Green	Water Clear	3.1	3.6	520	525	530
	OSR5PAA131A		Red	Water Clear	2.1	2.6	620	625	630
	OSY5PAA131A		Yellow	Water Clear	2.1	2.6	585	590	595
	OSO5PAA131A		Orange	Water Clear	2.1	2.6	600	605	610
<i>2x3x4 Rectangular Type</i>									
	OSB5SA7BA1F		Blue	Water Clear	3.1	3.6	465	470	475
	OSG5DA7BA1F		Pure Green	Water Clear	3.1	3.6	520	525	530
	OSR5PA7BA1F		Red	Water Clear	2.1	2.6	620	625	630
	OSY5PA7BA1F		Yellow	Water Clear	2.1	2.6	585	590	595
	OSO5PA7BA1F		Orange	Water Clear	2.1	2.6	600	605	610
<i>2x5x7 Rectangular Type</i>									
	OSB5SA71A1F		Blue	Water Clear	3.1	3.6	465	470	475
	OSG5DA71A1F		Pure Green	Water Clear	3.1	3.6	520	525	530
	OSR5PA71A1F		Red	Water Clear	2.1	2.6	620	625	630
	OSY5PA71A1F		Yellow	Water Clear	2.1	2.6	585	590	595
	OSO5PA71A1F		Orange	Water Clear	2.1	2.6	600	605	610

Luminous Intensity (mcd)		Directivity 2 $\theta$ 1/2 (degree)	IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
						I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>sig</sub> (°C)	
Min.	Typ.											
25000	30000	30	50	10	5	50	100	5	108	-30~+85	-40~+100	Wave Soldering
18000	22000	30	70	10	5	70	100	5	182	-30~+85	-40~+100	
18000	22000	30	70	10	5	70	120	5	182	-30~+85	-40~+100	
12000	14000	30	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
4200	6000	30	20	10	5	50	120	5	130	-30~+85	-40~+100	
4200	6000	30	20	10	5	50	120	5	130	-30~+85	-40~+100	
4200	5500	30	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
8400	10000	30	20	10	5	30	100	5	108	-30~+85	-40~+100	
7000	8000	30	20	10	5	50	120	5	130	-30~+85	-40~+100	
7000	8000	30	20	10	5	50	120	5	130	-30~+85	-40~+100	
7000	8000	30	20	10	5	50	120	5	130	-30~+85	-40~+100	
14000	16000	30	20	10	5	50	120	5	130	-30~+85	-40~+100	
14000	16000	30	20	10	5	50	120	5	130	-30~+85	-40~+100	
12000	14400	15	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
25000	30000	15	20	10	5	30	100	5	108	-30~+85	-40~+100	
20000	25000	15	20	10	5	50	120	5	130	-30~+85	-40~+100	
20000	25000	15	20	10	5	50	120	5	130	-30~+85	-40~+100	
20000	25000	15	20	10	5	50	120	5	130	-30~+85	-40~+100	
50000	60000	15	20	10	5	50	120	5	130	-30~+85	-40~+100	
50000	60000	15	20	10	5	50	120	5	130	-30~+85	-40~+100	
8000	9000	8	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
30000	35000	8	20	10	5	30	100	5	108	-30~+85	-40~+100	
36000	40000	8	20	10	5	50	120	5	130	-30~+85	-40~+100	
36000	40000	8	20	10	5	50	120	5	130	-30~+85	-40~+100	
36000	40000	8	20	10	5	50	120	5	130	-30~+85	-40~+100	
750	900	100	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
2000	2500	100	20	10	5	30	100	5	108	-30~+85	-40~+100	
1560	2000	100	20	10	5	50	120	5	130	-30~+85	-40~+100	
1560	2000	100	20	10	5	50	120	5	130	-30~+85	-40~+100	
1560	2000	100	20	10	5	50	120	5	130	-30~+85	-40~+100	
4200	5500	30	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
18000	21000	30	20	10	5	30	100	5	108	-30~+85	-40~+100	
14400	17000	30	20	10	5	50	120	5	130	-30~+85	-40~+100	
14400	17000	30	20	10	5	50	120	5	130	-30~+85	-40~+100	
14400	17000	30	20	10	5	50	120	5	130	-30~+85	-40~+100	
330	600	100	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
750	1200	100	20	10	5	30	100	5	108	-30~+85	-40~+100	
750	1120	100	20	10	5	50	120	5	130	-30~+85	-40~+100	
750	1120	100	20	10	5	50	120	5	130	-30~+85	-40~+100	
750	1120	100	20	10	5	50	120	5	130	-30~+85	-40~+100	
500	750	100	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
1560	2500	100	20	10	5	30	100	5	108	-30~+85	-40~+100	
1120	1560	100	20	10	5	50	120	5	130	-30~+85	-40~+100	
1120	1560	100	20	10	5	50	120	5	130	-30~+85	-40~+100	
1120	1560	100	20	10	5	50	120	5	130	-30~+85	-40~+100	

Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Chromaticity Coordinates						
				Typ.	Max.	x			y			
						Min.	Typ	Max.	Min.	Typ	Max.	
<i>5.0x4.1mm Oval Low Decay Type</i>												
	OSW54K5471D	●	Cool White	Water Clear	3.1	3.6	0.23	0.27	0.31	0.24	0.28	0.32
	OSM54K5471D	●	Warm White	Water Clear	3.1	3.6	0.41	0.45	0.49	0.37	0.41	0.45
	OSK54K5471D	●	Pink	Water Clear	3.1	3.6	0.41	0.45	0.49	0.13	0.17	0.21
<i>5.1x4.3mm Oval Low Decay Type</i>												
	OSW54K5HA1D	●	Cool White	Water Clear	3.1	3.6	0.23	0.27	0.31	0.24	0.28	0.32
	OSM54K5HA1D	●	Warm White	Water Clear	3.1	3.6	0.41	0.45	0.49	0.37	0.41	0.45
	OSK54K5HA1D	●	Pink	Water Clear	3.1	3.6	0.41	0.45	0.49	0.13	0.17	0.21
Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Dominant Wavelength wd(nm)						
				Typ.	Max.	Min.	Typ.	Max.				
<i>5.0x4.1mm Oval Type</i>												
	OSB5SA5471D	●	Blue	Water Clear	3.1	3.6	465	470	475			
	OSG5DA5471D	●	Pure Green	Water Clear	3.1	3.6	520	525	530			
	OSR5RU5471D	●	Red	Water Clear	2.1	2.6	620	625	630			
	OSY5RU5471D	●	Yellow	Water Clear	2.1	2.6	585	590	595			
	OSO5JA5471D	●	Orange	Water Clear	2.1	2.6	600	605	610			
	OSR5PA5471D	●	Red	Water Clear	2.1	2.6	620	625	630			
	OSY5PA5471D	●	Yellow	Water Clear	2.1	2.6	585	590	595			
	OSO5PA5471D	●	Orange	Water Clear	2.1	2.6	600	605	610			
	<i>5.1x4.3mm Oval Type</i>											
	OSB5SA5HA1D	●	Blue	Water Clear	3.1	3.6	465	470	475			
	OSG5DA5HA1D	●	Pure Green	Water Clear	3.1	3.6	520	525	530			
	OSR5RU5HA1D	●	Red	Water Clear	2.1	2.6	620	625	630			
	OSY5RU5HA1D	●	Yellow	Water Clear	2.1	2.6	585	590	595			
	OSO5JA5HA1D	●	Orange	Water Clear	2.1	2.6	600	605	610			
	OSR5PA5HA1D	●	Red	Water Clear	2.1	2.6	620	625	630			
	OSY5PA5HA1D	●	Yellow	Water Clear	2.1	2.6	585	590	595			
	OSO5PA5HA1D	●	Orange	Water Clear	2.1	2.6	600	605	610			
	<i>546 Oval Type(1R1G1B)</i>											
	OSB5SA5JB4D	●	Blue	Color Diffused	3.1	3.6	465	470	475			
	OSG5DA5JB4D	●	Pure Green	Color Diffused	3.1	3.6	520	525	530			
	OSR5PA5JB4D	●	Red	Color Diffused	2.1	2.6	620	625	630			
<i>546 Oval Type(2R1G1B)</i>												
	OSB5SA5JB4D	●	Blue	Color Diffused	3.1	3.6	465	470	475			
	OSG5DA5JB4D	●	Pure Green	Color Diffused	3.1	3.6	520	525	530			
	OSR5CA5JB4D	●	Red	Color Diffused	2.1	2.6	620	625	630			
<i>546 Oval Type(1R1G1B)</i>												
	OSB56A5JB4D	●	Blue	Color Diffused	3.1	3.6	465	470	475			
	OSG58A5JB4D	●	Pure Green	Color Diffused	3.1	3.6	520	525	530			
	OSR5CA5JB4D	●	Red	Color Diffused	2.1	2.6	620	625	630			
<i>546 Oval Type(2R1G1B)</i>												
	OSB56A5JB4D	●	Blue	Color Diffused	3.1	3.6	465	470	475			
	OSG58A5JB4D	●	Pure Green	Color Diffused	3.1	3.6	520	525	530			
	OSR5RU5JB4D	●	Red	Color Diffused	2.1	2.6	620	625	630			

Luminous Intensity (mcd)		Directivity 2θ1/2 (degree)	IF (mA)	Reverse Current IR Max.(uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
Min.	Typ.					IF (mA)	IFP *1 (mA)	VR (V)	PD (mW)	Topr (°C)	Tstg (°C)	
30000	35000	70/40	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
25000	30000	70/40	20	10	5	30	100	5	108	-30~+85	-40~+100	
3500	4200	70/40	20	10	5	30	100	5	108	-30~+85	-40~+100	
40000	45000	100/40	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
35000	40000	100/40	20	10	5	30	100	5	108	-30~+85	-40~+100	
5500	6500	100/40	20	10	5	30	100	5	108	-30~+85	-40~+100	
Luminous Intensity (mcd)		Directivity 2θ1/2 (degree)	IF (mA)	Reverse Current IR Max.(uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
Min.	Typ.					IF (mA)	IFP (mA)	VR (V)	PD (mW)	Topr (°C)	Tstg (°C)	
2500	3500	70/40	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
12000	15000	70/40	20	10	5	30	100	5	108	-30~+85	-40~+100	
2180	3000	70/40	20	10	5	30	100	5	78	-30~+85	-40~+100	
2180	3000	70/40	20	10	5	30	100	5	78	-30~+85	-40~+100	
2180	3000	70/40	20	10	5	30	100	5	78	-30~+85	-40~+100	
4200	5500	70/40	20	10	5	50	120	5	130	-30~+85	-40~+100	
4200	5500	70/40	20	10	5	50	120	5	130	-30~+85	-40~+100	
4200	5500	70/40	20	10	5	50	120	5	130	-30~+85	-40~+100	
4200	5000	100/40	20	10	5	30	100	5	108	-30~+85	-40~+100	
18000	22000	100/40	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
3000	4500	100/40	20	10	5	30	100	5	78	-30~+85	-40~+100	
3000	4500	100/40	20	10	5	30	100	5	78	-30~+85	-40~+100	
3000	4500	100/40	20	10	5	30	100	5	78	-30~+85	-40~+100	
7000	8000	100/40	20	10	5	50	120	5	130	-30~+85	-40~+100	
7000	8000	100/40	20	10	5	50	120	5	130	-30~+85	-40~+100	
7000	8000	100/40	20	10	5	50	120	5	130	-30~+85	-40~+100	
330	450	110/40	20	10	5	30	100	5	108	-30~+85	-40~+100	
1560	2180	110/40	20	10	5	30	100	5	108	-30~+85	-40~+100	
500	800	110/40	20	10	5	50	100	5	130	-30~+85	-40~+100	
330	450	110/40	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
1560	2180	110/40	20	10	5	30	100	5	108	-30~+85	-40~+100	
330	450	110/40	20	10	5	30	100	5	78	-30~+85	-40~+100	
330	550	110/40	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
1560	2500	110/40	20	10	5	50	120	5	180	-30~+85	-40~+100	
750	1120	110/40	20	10	5	70	120	5	182	-30~+85	-40~+100	
330	550	110/40	20	10	5	30	100	5	108	-30~+85	-40~+100	Wave Soldering
1560	2500	110/40	20	10	5	50	120	5	180	-30~+85	-40~+100	
330	500	110/40	20	10	5	70	120	5	182	-30~+85	-40~+100	

# Bi-color & Full Color LED Series

Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Dominant Wavelength wd(nm)			Luminous Intensity (mcd)	
				Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
<b>Φ3 Round Bi-Color Type</b>										
	OSRGHC3131A	Red	Water Clear	2.1	2.6	620	625	630	750	1120
		Yellow Green		2.1	2.6	565	570	575	500	800
	OSRBMC3131A	Red	Water Clear	2.1	2.6	620	625	630	5800	6500
		Blue		3.1	3.6	465	470	475	2180	3000
<b>Φ5 Round Bi-Color Type</b>										
	OSRGHC5B31A	Red	Water Clear	2.1	2.6	620	625	630	1120	1560
		Yellow Green		2.1	2.6	565	570	575	750	1100
	OSRBMC5B31A	Red	Water Clear	2.1	2.6	620	625	630	7000	8500
		Blue		2.1	2.6	465	470	475	3000	4000
<b>Φ5 Round Full Color Type</b>										
	OSTAMASB31A	Red	Water Clear	2.1	2.6	620	625	630	7000	8500
		Blue		3.1	3.6	465	470	475	3000	4000
		Pure Green		3.1	3.6	520	525	530	12000	14400
	OSTAMC5B32A	Red	White Diffused	2.1	2.6	620	625	630	3000	4200
		Blue		3.1	3.6	465	470	475	1560	2000
		Pure Green		3.1	3.6	520	525	530	5800	7000
<b>Φ3 Round Mono-Color Flashing Type</b>										
	OSB5SS3131A	Blue	Water Clear	3.3	4.5	465	470	475	1560	2200
	OSG3DS3131A	Bluish Green	Water Clear	3.3	4.5	500	505	510	5800	7000
	OSG5DS3131A	Pure Green	Water Clear	3.3	4.5	520	525	530	5800	7000
	OSR5MS3131A	Red	Water Clear	3.3	4.5	620	625	630	4200	5000
	OSY5MS3131A	Yellow	Water Clear	3.3	4.5	585	590	595	4200	5000
	OSO5MS3131A	Orange	Water Clear	3.3	4.5	600	605	610	4200	5000
<b>Φ5 Round Mono-Color Flashing Type</b>										
	OSB5SS5A31A	Blue	Water Clear	3.3	4.5	465	470	475	2000	2500
	OSG3DS5A31A	Bluish Green	Water Clear	3.3	4.5	500	505	510	12000	14400
	OSG5DS5A31A	Pure Green	Water Clear	3.3	4.5	520	525	530	12000	14400
	OSR5MS5A31A	Red	Water Clear	3.3	4.5	620	625	630	5800	7000
	OSY5MS5A31A	Yellow	Water Clear	3.3	4.5	585	590	595	5800	7000
	OSO5MS5A31A	Orange	Water Clear	3.3	4.5	600	605	610	5800	7000
<b>Φ5 Round Bi-Color Flashing Type</b>										
	OSRBMS5A31A	Red	Water Clear	3.3	4.5	620	625	630	5800	7000
		Blue				465	470	475	2000	2500
	OSRPMS5A31A	Red	Water Clear	3.3	4.5	620	625	630	5800	7000
		Pure Green				520	525	530	12000	14400
<b>Φ5 Round Full Color Flashing Type</b>										
	OST1MA5A31A	Red	Water Clear	4.5	5.0	620	625	630	7000	8400
		Blue				465	470	475	3000	4000
		Pure Green				520	525	530	12000	14400
	OST1MA5A32A	Red	White Diffused	4.5	5.0	620	625	630	3000	4000
		Blue				465	470	475	1560	2180
		Pure Green				520	525	530	5800	7000
	OST1MC5A31A	Red	Water Clear	4.5	5.0	620	625	630	7000	8400
		Blue				465	470	475	3000	4000
		Pure Green				520	525	530	12000	14400
	OST1MC5A32A	Red	White Diffused	4.5	5.0	620	625	630	3000	4000
		Blue				465	470	475	1560	2180
		Pure Green				520	525	530	5800	7000
<b>Φ5 Round Intelligent Control RGB LED</b>										
	OST4ML5B32A	Red	White Diffused	4.5	6.0	620	625	630	350	450
		Blue				465	470	475	150	200
		Pure Green				520	525	530	500	600

# Bi-color & Full Color LED Series

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30 Directivity 201/2 (degree)	IF (mA)	Reverse Current IR Max.(uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
				IF (mA)	IFP (mA)	VR (V)	PD (mW)	Topr (°C)	Tsig (°C)	
30	20	10	5	30	100	5	78	-30~+85	-40~+100	Wave Soldering
30	20	10	5	30	100	5	78	-30~+85	-40~+100	
30	20	10	5	30	100	5	78	-30~+85	-40~+100	Wave Soldering
30	20	10	5	30	100	5	78	-30~+85	-40~+100	
30	20	10	5	50	120	5	130	-30~+85	-40~+100	Wave Soldering
30	20	10	5	30	100	5	108	-30~+85	-40~+100	
30	20	10	5	30	100	5	108	-30~+85	-40~+100	
Directivity 201/2 (degree)	IF (mA)	Blinking Cycle	Duty Cycle	Absolute Maximum Rating (Ta=25°C)						Mounting
Vdd (V)	IFP (mA)	VR (V)	PD (mW)	Topr (°C)	Tsig (°C)					
30	20	1.8	1/2	4.5	-	-	-	-30~+85	-40~+100	Wave Soldering
30	20	1.8	1/2	4.5	-	-	-	-30~+85	-40~+100	
30	20	1.8	1/2	4.5	-	-	-	-30~+85	-40~+100	
30	20	1.8	1/2	4.5	-	-	-	-30~+85	-40~+100	
30	20	1.8	1/2	4.5	-	-	-	-30~+85	-40~+100	
30	20	1.8	1/2	4.5	-	-	-	-30~+85	-40~+100	
30	20	1.8	1/2	4.5	-	-	-	-30~+85	-40~+100	Wave Soldering
30	20	1.8	1/2	4.5	-	-	-	-30~+85	-40~+100	
30	20	33	-	5	-	-	-	-30~+85	-40~+100	Wave Soldering
30	20	33	-	5	-	-	-	-30~+85	-40~+100	
30	20	12	-	5	-	-	-	-30~+85	-40~+100	Wave Soldering
30	20	12	-	5	-	-	-	-30~+85	-40~+100	
30	15	1. Completely receive and decode data through a single wire. 2. Adjust grayscale circuit (can adjust 256 grayscale level)		3.5~6.0	-	-	-	-30~+85	-40~+100	Wave Soldering



Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Dominant Wavelength wd(nm)		
				Typ.	Max.	Min.	Typ.	Max.
<i>0402 SMD</i>								
	OSB50402C1C	Blue	Water Clear	3.2	3.6	460	465	475
	OSG50402C1C	Ture Green	Water Clear	3.2	3.6	517	525	530
	OSG80402C1C	Yellow Green	Water Clear	2.0	2.6	565	570	575
	OSY50402C1C	Yellow	Water Clear	2.0	2.6	585	590	595
	OSO50402C1C	Orange	Water Clear	2.0	2.6	600	605	610
	OSR50402C1C	Red	Water Clear	2.0	2.6	620	625	630
<i>0603 SMD</i>								
	OSB50603C1E	Blue	Water Clear	2.8	3.4	455	470	475
	OSG50603C1E	Ture Green	Water Clear	2.8	3.4	520	525	530
	OSG80603C1E	Yellow Green	Water Clear	1.8	2.4	565	570	575
	OSY50603C1E	Yellow	Water Clear	1.8	2.4	586	590	592
	OSO50603C1E	Orange	Water Clear	1.8	2.4	600	605	610
	OSR50603C1E	Red	Water Clear	1.8	2.4	6170	625	630
<i>0603 Dome Lens</i>								
	OSB5060341F	Blue	Water Clear	3.1	3.4	460	465	470
	OSG5060341F	Ture Green	Water Clear	3.1	3.4	518	521	526
	OSG8060341F	Yellow Green	Water Clear	2.1	2.4	565	570	575
	OSY5060341F	Yellow	Water Clear	2.1	2.4	585	590	595
	OSO5060341F	Orange	Water Clear	2.1	2.4	600	605	610
	OSR5060341F	Red	Water Clear	2.1	2.4	617	621	625
<i>0805 SMD</i>								
	OSB50805C1E	Blue	Water Clear	3.2	3.6	465	470	475
	OSG50805C1E	Ture Green	Water Clear	3.2	3.6	520	525	530
	OSG80805C1E	Yellow Green	Water Clear	2.0	2.6	565	570	575
	OSY50805C1E	Yellow	Water Clear	2.1	2.6	585	590	595
	OSO50805C1E	Orange	Water Clear	2.0	2.6	600	605	610
	OSR50805C1E	Red	Water Clear	2.0	2.6	620	625	630
<i>1206 SMD</i>								
	OSB51206C1E	Blue	Water Clear	3.1	3.6	460	465	475
	OSG51206C1E	Ture Green	Water Clear	3.1	3.6	520	525	530
	OSG81206C1E	Yellow Green	Water Clear	2.1	2.6	565	570	575
	OSY51206C1E	Yellow	Water Clear	2.1	2.6	585	590	595
	OSO51206C1E	Orange	Water Clear	2.0	2.6	600	605	610
	OSR51206C1E	Red	Water Clear	2.0	2.6	620	625	630
<i>1206 Dome Lens</i>								
	OSB5120641E	Blue	Water Clear	3.0	3.4	460	465	475
	OSG5120641E	Ture Green	Water Clear	3.0	3.4	515	520	530
	OSG8120641E	Yellow Green	Water Clear	2.0	2.4	565	570	575
	OSY5120641E	Yellow	Water Clear	2.0	2.4	585	590	595
	OSO5120641E	Orange	Water Clear	2.0	2.4	600	605	610
	OSR5120641E	Red	Water Clear	2.0	2.4	615	620	630
<i>0602 Side View SMD</i>								
	OSB50602C1E	Blue	Water Clear	3.0	3.4	460	465	475
	OSG50602C1E	Ture Green	Water Clear	3.0	3.4	515	523	530
	OSG80602C1E	Yellow Green	Water Clear	2.0	2.4	565	570	575
	OSY50602C1E	Yellow	Water Clear	2.0	2.4	585	590	595
	OSO50602C1E	Orange	Water Clear	2.0	2.4	600	605	610
	OSR50602C1E	Red	Water Clear	2.0	2.4	615	620	630
<i>0802 Side View SMD</i>								
	OSB50802C1E	Blue	Water Clear	3.0	3.4	460	465	475
	OSG50802C1E	Ture Green	Water Clear	3.0	3.4	518	525	530
	OSG80802C1E	Yellow Green	Water Clear	2.0	2.4	565	570	575
	OSY50802C1E	Yellow	Water Clear	2.0	2.4	585	590	595
	OSO50802C1E	Orange	Water Clear	2.0	2.4	600	605	610
	OSR50802C1E	Red	Water Clear	2.0	2.4	617	625	630
<i>1204 Side View SMD</i>								
	OSB51204C1E	Blue	Water Clear	3.0	3.4	462	467	472
	OSG51204C1E	Ture Green	Water Clear	3.0	3.4	518	522	526
	OSG81204C1E	Yellow Green	Water Clear	2.0	2.4	566	569	572
	OSY51204C1E	Yellow	Water Clear	2.0	2.4	586	589	592
	OSO51204C1E	Orange	Water Clear	2.0	2.4	600	605	610
	OSR51204C1E	Red	Water Clear	2.0	2.4	617	621	625

Luminous Intensity (mcd)	Directivity 201/2 (degree)	IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting	
					I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)		
Min.	Typ.											
60	90	120	20	10	5	20	100	5	72	-30~+85	-40~+100	Reflow
250	400	120	20	10	5	20	100	5	72	-30~+85	-40~+100	
20	30	120	20	10	5	20	100	5	52	-30~+85	-40~+100	
50	100	120	20	10	5	20	100	5	52	-30~+85	-40~+100	
50	100	120	20	10	5	20	100	5	52	-30~+85	-40~+100	
50	100	120	20	10	5	20	100	5	52	-30~+85	-40~+100	
14	25	120	5	10	5	20	100	5	68	-40~+100	-40~+100	Reflow
120	180	120	5	10	5	20	100	5	68	-40~+100	-40~+100	
5	10	120	5	10	5	20	100	5	48	-40~+100	-40~+100	
15	35	120	5	10	5	20	100	5	48	-40~+100	-40~+100	
15	35	120	5	10	5	20	100	5	48	-40~+100	-40~+100	
15	35	120	5	10	5	20	100	5	48	-40~+100	-40~+100	
150	350	35	20	10	5	30	100	5	102	-30~+85	-40~+100	Reflow
1300	2500	35	20	10	5	30	100	5	102	-30~+85	-40~+100	
70	150	35	20	10	5	30	80	5	72	-30~+85	-40~+100	
200	400	35	20	10	5	30	80	5	72	-30~+85	-40~+100	
200	400	35	20	10	5	30	80	5	72	-30~+85	-40~+100	
200	400	35	20	10	5	30	80	5	72	-30~+85	-40~+100	
42	80	120	20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
400	450	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
20	35	120	20	10	5	30	100	5	78	-30~+85	-40~+100	
100	120	120	20	10	5	30	100	5	78	-30~+85	-40~+100	
100	120	120	20	10	5	30	100	5	78	-30~+85	-40~+100	
120	150	120	20	10	5	30	100	5	78	-30~+85	-40~+100	
80	100	120	20	10	5	30	100	5	108	-40~+85	-40~+85	Reflow
300	350	120	20	10	5	30	100	5	108	-40~+85	-40~+85	
20	45	120	20	10	5	30	100	5	78	-40~+85	-40~+85	
60	90	120	20	10	5	30	100	5	78	-40~+85	-40~+85	
100	120	120	20	10	5	30	100	5	78	-40~+85	-40~+85	
100	120	120	20	10	5	30	100	5	78	-40~+85	-40~+85	
650	850	35	20	10	5	30	100	5	102	-30~+85	-40~+100	Reflow
2000	2500	35	20	10	5	30	100	5	102	-30~+85	-40~+100	
100	150	35	20	10	5	30	100	5	72	-30~+85	-40~+100	
300	500	35	20	10	5	30	100	5	72	-30~+85	-40~+100	
300	400	35	20	10	5	30	100	5	72	-30~+85	-40~+100	
650	850	35	20	10	5	30	100	5	72	-30~+85	-40~+100	
120	210	120	20	10	5	30	100	5	102	-30~+85	-40~+100	Reflow
350	600	120	20	10	5	30	100	5	102	-30~+85	-40~+100	
25	50	120	20	10	5	25	80	5	60	-30~+85	-40~+100	
70	150	120	20	10	5	25	80	5	60	-30~+85	-40~+100	
70	150	120	20	10	5	25	80	5	60	-30~+85	-40~+100	
70	150	120	20	10	5	25	80	5	60	-30~+85	-40~+100	
30	70	120	20	10	5	25	100	5	85	-30~+85	-40~+100	Reflow
400	700	120	20	10	5	25	100	5	85	-30~+85	-40~+100	
25	50	120	20	10	5	25	100	5	65	-30~+85	-40~+100	
70	150	120	20	10	5	25	100	5	65	-30~+85	-40~+100	
70	150	120	20	10	5	25	100	5	65	-30~+85	-40~+100	
70	150	120	20	10	5	25	100	5	65	-30~+85	-40~+100	
120	250	120	20	10	5	30	100	5	102	-30~+85	-40~+100	Reflow
350	600	120	20	10	5	30	100	5	102	-30~+85	-40~+100	
25	50	120	20	10	5	25	80	5	60	-30~+85	-40~+100	
70	150	120	20	10	5	25	80	5	60	-30~+85	-40~+100	
70	150	120	20	10	5	25	80	5	60	-30~+85	-40~+100	
70	150	120	20	10	5	25	80	5	60	-30~+85	-40~+100	






# Surface Mount LED Series

Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Dominant Wavelength wd(nm)		
				Typ.	Max.	Min.	Typ.	Max.
<b>3224 SMD</b>								
	OSB5322441E	Blue	Water Clear	3.0	3.4	464	468	472
	OSG5322441E	Pure Green	Water Clear	3.0	3.4	518	522	526
	OSG8322441E	Yellow Green	Water Clear	2.0	2.4	566	569	572
	OSY5322441E	Yellow	Water Clear	2.0	2.4	586	590	592
	OSO5322441E	Orange	Water Clear	2.0	2.4	600	605	610
	OSR5322441E	Red	Water Clear	2.0	2.4	617	621	625
<b>2016 SMD</b>								
	OSB42016C1A-60MA	Blue	Water Clear	3.2	3.8	455	460	465
	OSG52016C1A-60MA	Pure Green	Water Clear	3.2	3.8	520	525	530
	OSY52016C1A-60MA	Yellow	Water Clear	2.1	2.6	585	590	595
	OSR52016C1A-60MA	Red	Water Clear	2.1	2.6	620	625	630
<b>2835 SMD</b>								
	OSB42835C1H-60MA	Blue	Water Clear	3.0	3.4	455	460	470
	OSG52835C1H-60MA	Pure Green	Water Clear	3.0	3.4	520	525	530
	OSY52835C1H-60MA	Yellow	Water Clear	2.0	2.4	585	590	595
	OSR52835C1H-60MA	Red	Water Clear	2.0	2.4	620	625	630
<b>3014 SMD</b>								
	OSB43014C1A-30MA	Blue	Water Clear	3.1	3.6	455	460	465
	OSG53014C1A-30MA	Pure Green	Water Clear	3.1	3.6	520	525	530
	OSY53014C1A-30MA	Yellow	Water Clear	2.1	2.6	585	590	595
	OSR53014C1A-30MA	Red	Water Clear	2.1	2.6	620	625	630
<b>3020 SMD</b>								
	OSB53020C1C	Blue	Water Clear	3.2	3.6	465	470	475
	OSG53020C1C	Pure Green	Water Clear	3.0	3.6	520	525	530
	OSY53020C1C	Yellow	Water Clear	2.1	2.6	585	590	595
	OSR53020C1C	Red	Water Clear	2.1	2.6	620	625	630
<b>5630 SMD</b>								
	OSB55630C1D	Blue	Water Clear	3.1	3.6	455	465	470
	OSG55630C1D	Pure Green	Water Clear	3.1	3.6	520	525	530
	OSY55630C1D	Yellow	Water Clear	2.1	2.6	585	590	595
	OSR55630C1D	Red	Water Clear	2.1	2.6	620	625	630
<b>3528 3-Chip PLCC4 Power Top</b>								
	OSB56353C1A	Blue	Water Clear	9.3	10.8	465	470	475
	OSG58353C1A	Pure Green	Water Clear	9.3	10.8	520	525	530
	OSR5M353C1A	Red	Water Clear	6.3	7.8	620	625	630
	OSY5M353C1A	Yellow	Water Clear	6.3	7.8	585	590	595
	OSO5M353C1A	Orange	Water Clear	6.3	7.8	600	605	610
<b>3528 Power Top</b>								
	OSB56L53C1A	Blue	Water Clear	3.3	3.8	465	470	475
	OSG38AS3C1A	Bluish Green	Water Clear	3.3	3.8	500	505	510
	OSG58AS3C1A	Pure Green	Water Clear	3.3	3.8	520	525	530
	OSR5CAS3C1A	Red	Water Clear	2.2	2.6	620	625	630
	OSY5CAS3C1A	Yellow	Water Clear	2.2	2.6	585	590	595
	OSO5CAS3C1A	Orange	Water Clear	2.2	2.6	600	605	610

# Surface Mount LED Series

Luminous Intensity (mcd)		Directivity 201/2 (degree)	IF (mA)	Reverse Current IR Max.(uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
Min.	Typ.					IF (mA)	IFP (mA)	VR (V)	PD (mW)	Topr (°C)	Tstg (°C)	
800	1500	35	20	10	5	30	100	5	102	-40~+85	-40~+85	Reflow
2000	3500	35	20	10	5	30	100	5	102	-40~+85	-40~+85	
100	150	35	20	10	5	30	100	5	72	-40~+85	-40~+85	
600	1000	35	20	10	5	30	100	5	72	-40~+85	-40~+85	
600	1000	35	20	10	5	30	100	5	72	-40~+85	-40~+85	
600	1000	35	20	10	5	30	100	5	72	-40~+85	-40~+85	
500	750	120	60	10	5	60	100	5	228	-30~+85	-40~+100	Reflow
3000	3500	120	60	10	5	60	100	5	228	-30~+85	-40~+100	
1120	1560	120	60	10	5	60	100	5	156	-30~+85	-40~+100	
1120	1560	120	60	10	5	60	100	5	156	-30~+85	-40~+100	
2 lm	2 lm	120	60	10	5	80	150	5	272	-30~+85	-40~+100	Reflow
10 lm	15 lm	120	60	10	5	80	150	5	272	-30~+85	-40~+100	
4 lm	6 lm	120	60	10	5	80	150	5	192	-30~+85	-40~+100	
4 lm	6 lm	120	60	10	5	80	150	5	192	-30~+85	-40~+100	
300	400	120	30	10	5	35	100	5	126	-40~+85	-40~+85	Reflow
1600	2000	120	30	10	5	35	100	5	126	-40~+85	-40~+85	
800	1000	120	30	10	5	35	100	5	91	-40~+85	-40~+85	
800	1000	120	30	10	5	35	100	5	91	-40~+85	-40~+85	
100	200	120	20	10	5	25	100	5	90	-25~+85	-35~+85	Reflow
400	600	120	20	10	5	25	100	5	90	-25~+85	-35~+85	
100	200	120	20	10	5	25	100	5	65	-25~+85	-35~+85	
100	200	120	20	10	5	25	100	5	65	-25~+85	-35~+85	
5 lm	8 lm	120	150	10	5	150	200	5	540	-30~+85	-40~+100	Reflow
25 lm	30 lm	120	150	10	5	150	200	5	540	-30~+85	-40~+100	
10 lm	15 lm	120	150	10	5	150	200	5	390	-30~+85	-40~+100	
10 lm	15 lm	120	150	10	5	150	200	5	390	-30~+85	-40~+100	
1120	1560	120	20	10	15	30	50	15	324	-30~+85	-40~+100	Reflow
3000	4200	120	20	10	15	30	50	15	324	-30~+85	-40~+100	
2180	3000	120	20	10	15	30	60	15	234	-30~+85	-40~+100	
2180	3000	120	20	10	15	30	60	15	234	-30~+85	-40~+100	
2180	3000	120	20	10	15	30	60	15	234	-30~+85	-40~+100	
500	900	120	50	10	5	50	100	5	190	-30~+85	-40~+100	Reflow
2180	3300	120	50	10	5	50	100	5	190	-30~+85	-40~+100	
2180	3300	120	50	10	5	50	100	5	190	-30~+85	-40~+100	
2180	2800	120	70	10	5	70	120	5	182	-30~+85	-40~+100	
2180	2800	120	70	10	5	70	120	5	182	-30~+85	-40~+100	
2180	2800	120	70	10	5	70	120	5	182	-30~+85	-40~+100	

# Surface Mount LED Series

Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Color Temperature CCT(K)		
				Typ.	Max.			
<i>3528 PLCC2 Type</i>								
	OSW43528C1A	● Pure White	Yellow Diffused	3.1	3.6	6000-7000K		
	OSM43528C1A	● Warm White	Yellow Diffused	3.1	3.6	2500-2800K		
	OSM53528C1A	● Warm White	Yellow Diffused	3.1	3.6	2800-3200K		
	OSM63528C1A	● Warm White	Yellow Diffused	3.1	3.6	3800-4200K		
<i>5050 PLCC6 Type</i>								
	OSW45050C1A	● Pure White	Yellow Diffused	3.1	3.6	6000-7000K		
	OSM45050C1A	● Warm White	Yellow Diffused	3.1	3.6	2500-2800K		
	OSM55050C1A	● Warm White	Yellow Diffused	3.1	3.6	2800-3200K		
	OSM65050C1A	● Warm White	Yellow Diffused	3.1	3.6	3800-4200K		
Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Dominant Wavelength wd(nm)		
				Typ.	Max.	Min.	Typ.	Max.
<i>3528 PLCC2 Type</i>								
	OSB53528C1A	● Blue	Water Clear	3.1	3.6	465	470	475
	OSG53528C1A	● Pure Green	Water Clear	3.1	3.6	515	522	530
	OSR53528C1A	● Red	Water Clear	2.1	2.6	615	622	630
	OSY53528C1A	● Yellow	Water Clear	2.1	2.6	580	588	595
<i>5050 PLCC6 Type</i>								
	OSB55050C1A	● Blue	Water Clear	3.1	3.6	465	470	475
	OSG55050C1A	● Pure Green	Water Clear	3.1	3.6	515	522	530
	OSR55050C1A	● Red	Water Clear	2.1	2.6	615	622	630
	OSY55050C1A	● Yellow	Water Clear	2.1	2.6	585	590	595
<i>Full Color Type</i>								
	OSTC5050C1A	● Pure Green	Water Clear	3.1	3.6	520	525	530
		● Red		2.1	2.6	620	625	630
		● Blue		3.1	3.6	465	470	475
	OSTF5050C1A	● Blue	Water Clear	3.1	3.6	465	470	475
		● Red		2.1	2.6	620	625	630
		● Pure Green		3.1	3.6	520	525	530

# Surface Mount LED Series

Luminous Intensity (mcd)		Directivity 2θ1/2 (degree)	IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
Min.	Typ.					I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	
1560	2180	120	20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
1560	2180	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
1560	2180	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
1560	2180	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
5800	7000	120	60	10	5	75	100	5	270	-30~+85	-40~+100	Reflow
5800	7000	120	60	10	5	75	100	5	270	-30~+85	-40~+100	
5800	7000	120	60	10	5	75	100	5	270	-30~+85	-40~+100	
5800	7000	120	60	10	5	75	100	5	270	-30~+85	-40~+100	
Luminous Intensity (mcd)		Directivity 2θ1/2 (degree)	IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
Min.	Typ.					I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	
220	330	120	20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
1120	1560	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
500	750	120	20	10	5	50	120	5	130	-30~+85	-40~+100	
500	750	120	20	10	5	50	120	5	130	-30~+85	-40~+100	
750	1120	120	60	10	5	60	100	5	216	-30~+85	-40~+100	Reflow
4200	5800	120	60	10	5	60	100	5	216	-30~+85	-40~+100	
1560	2180	120	60	10	5	60	100	5	156	-30~+85	-40~+100	
1560	2180	120	60	10	5	60	100	5	156	-30~+85	-40~+100	
1800	2000	120	20	10	5	20	100	5	52	-30~+85	-40~+100	Reflow
700	800	120	20	10	5	20	100	5	72	-30~+85	-40~+100	
400	500	120	20	10	5	20	100	5	72	-30~+85	-40~+100	
400	500	120	20	10	5	20	100	5	72	-30~+85	-40~+100	
700	800	120	20	10	5	20	100	5	72	-30~+85	-40~+100	Reflow
1800	2000	120	20	10	5	20	100	5	52	-30~+85	-40~+100	

# Surface Mount LED Series

Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Dominant Wavelength					
				Typ.	Max.	Min.	Typ.				
<i>3528 PLCC2 Type</i>											
	OSB5SAS1C1A	Blue	Water Clear	3.1	3.6	465	470				
	OSG5DAS1C1A	Pure Green	Water Clear	3.1	3.6	520	525				
	OSR5MAS1C1A	Red	Water Clear	2.1	2.6	620	625				
	OSY5MAS1C1A	Yellow	Water Clear	2.1	2.6	585	590				
	OSO5MAS1C1A	Orange	Water Clear	2.1	2.6	600	605				
	OS5RKAS1C1A	Red	Water Clear	2.1	2.6	620	625				
	OS5YKAS1C1A	Yellow	Water Clear	2.1	2.6	585	590				
<i>5050 PLCC6 Type</i>											
	OSB5STS4C1A	Blue	Water Clear	3.1	3.6	465	470				
	OSG3DTS4C1A	Bluish Green	Water Clear	3.1	3.6	500	505				
	OSG5DTS4C1A	Pure Green	Water Clear	3.1	3.6	520	525				
	OSR5MTS4C1A	Red	Water Clear	2.1	2.6	620	625				
	OSY5MTS4C1A	Yellow	Water Clear	2.1	2.6	585	590				
	OSO5MTS4C1A	Orange	Water Clear	2.1	2.6	600	605				
	OS5RKS4C1A	Red	Water Clear	2.1	2.6	620	625				
OS5YKS4C1A	Yellow	Water Clear	2.1	2.6	585	590					
<i>3528 PLCC4 Bi-Color Type</i>											
	OSRGH4S2C1A	Red	Water Clear	2.1	2.6	620	625				
		Yellow Green		2.1	2.6	565	570				
	OSRBS4S2C1A	Red	Water Clear	2.1	2.6	620	625				
		Blue		3.1	3.6	465	470				
	OSRPS4S2C1A	Red	Water Clear	2.1	2.6	620	625				
		Pure Green		3.1	3.6	520	525				
	OSYGH4S2C1A	Yellow	Water Clear	2.1	2.6	585	590				
		Yellow Green		2.1	2.6	565	570				
	OSYBS4S2C1A	Yellow	Water Clear	2.1	2.6	585	590				
		Blue		3.1	3.6	465	470				
OSBPS4S2C1A	Blue	Water Clear	3.1	3.6	465	470					
	Pure Green		3.1	3.6	520	525					
<i>3528 &amp; 5050 Full Color Type</i>											
	OSTBMAS2C1A	Red	Water Clear	2.1	2.6	620	625				
		Pure Green		3.1	3.6	520	525				
		Blue		3.1	3.6	465	470				
	OSTBMAS2C2A	Red	White Diffused	2.1	2.6	620	625				
		Pure Green		3.1	3.6	520	525				
		Blue		3.1	3.6	465	470				
OSTCMB4C1A	Pure Green	Water Clear	3.1	3.6	520	525					
	Red		2.1	2.6	620	625					
	Blue		3.1	3.6	465	470					
OSTCMB4C2A	Pure Green	White Diffused	3.1	3.6	520	525					
	Red		2.1	2.6	620	625					
	Blue		3.1	3.6	465	470					
Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Chromaticity Coordinates					
				Typ.	Max.	x			y		
<i>3528 3-Chip PLCC4 Power Top Type</i>											
	OSW44S3C1A	Pure White	Yellow Diffused	9.3	10.8	0.27	0.31	0.35	0.29	0.33	0.37
	OSW54S3C1A	Cool White	Yellow Diffused	9.3	10.8	0.23	0.27	0.31	0.24	0.28	0.32
	OSM54S3C1A	Warm White	Yellow Diffused	9.3	10.8	0.41	0.45	0.49	0.37	0.41	0.45
<i>3528 Power Top SMD</i>											
	OSW54LS3C1A	Cool White	Yellow Diffused	3.3	3.8	0.23	0.27	0.31	0.24	0.28	0.32
	OSM54LS3C1A	Warm White	Yellow Diffused	3.3	3.8	0.41	0.45	0.49	0.37	0.41	0.45
<i>3528 PLCC2 Type</i>											
	OSW54LS1C1A	Cool White	Yellow Diffused	3.1	3.6	0.23	0.27	0.31	0.24	0.28	0.32
	OSM54LS1C1A	Warm White	Yellow Diffused	3.1	3.6	0.41	0.45	0.49	0.37	0.41	0.45
	OSK54LS1C1A	Pink	Red Diffused	3.1	3.6	0.41	0.45	0.49	0.13	0.17	0.21
<i>5050 PLCC6 Type</i>											
	OSW54TS4C1A	Cool White	Yellow Diffused	3.1	3.6	0.23	0.27	0.31	0.24	0.28	0.32
	OSM54TS4C1A	Warm White	Yellow Diffused	3.1	3.6	0.41	0.45	0.49	0.37	0.41	0.45
	OSK5DTS4C1A	Pink	Red Diffused	3.1	3.6	0.41	0.45	0.49	0.13	0.17	0.21
	OS4WMTS4C1A	Pure White	Yellow Diffused	3.1	3.6	0.27	0.31	0.35	0.29	0.33	0.37
	OS5MMTS4C1A	Warm White	Yellow Diffused	3.1	3.6	0.41	0.45	0.49	0.37	0.41	0.45

# Surface Mount LED Series

wd(nm)	Luminous Intensity (mcd)		Directivity 2θ1/2 (degree)	IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
	Min.	Typ.					I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	
475	220	400	120	20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow
530	750	1120	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
630	750	1000	120	20	10	5	50	120	5	130	-30~+85	-40~+100	
595	750	1000	120	20	10	5	50	120	5	130	-30~+85	-40~+100	
610	750	1000	120	20	10	5	50	120	5	130	-30~+85	-40~+100	
630	1560	2180	120	20	10	5	50	120	5	130	-30~+85	-40~+100	
595	1560	2180	120	20	10	5	50	120	5	130	-30~+85	-40~+100	
475	1120	1560	120	60	10	5	75	100	5	270	-30~+85	-40~+100	Reflow
510	2180	3000	120	60	10	5	75	100	5	270	-30~+85	-40~+100	
530	2180	3000	120	60	10	5	75	100	5	270	-30~+85	-40~+100	
630	2180	3000	120	60	10	5	90	100	5	234	-30~+85	-40~+100	
595	2180	3000	120	60	10	5	90	100	5	234	-30~+85	-40~+100	
610	2180	3000	120	60	10	5	90	120	5	234	-30~+85	-40~+100	
630	4200	5800	120	60	10	5	90	100	5	234	-30~+85	-40~+100	
595	4200	5800	120	60	10	5	90	100	5	234	-30~+85	-40~+100	
630	100	150	120	20	10	5	30	100	5	78	-30~+85	-40~+100	Reflow
575	45	60	120	20	10	5	30	100	5	78	-30~+85	-40~+100	
630	100	150	120	20	10	5	30	100	5	78	-30~+85	-40~+100	
475	100	130	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
630	220	300	120	20	10	5	30	100	5	78	-30~+85	-40~+100	
530	330	600	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
595	100	170	120	20	10	5	30	100	5	78	-30~+85	-40~+100	
575	30	50	120	20	10	5	30	100	5	78	-30~+85	-40~+100	
595	330	600	120	20	10	5	30	100	5	78	-30~+85	-40~+100	
475	150	200	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
475	150	200	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
530	330	600	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
630	750	1000	120	20	10	5	50	120	5	130	-30~+85	-40~+100	Reflow
530	750	900	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
475	220	400	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
630	330	500	120	20	10	5	50	120	5	130	-30~+85	-40~+100	
530	330	450	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
475	150	200	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
530	750	1120	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
630	750	1000	120	20	10	5	50	120	5	130	-30~+85	-40~+100	
475	220	400	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
530	330	500	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
630	330	500	120	20	10	5	50	120	5	130	-30~+85	-40~+100	
475	150	200	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
Luminous Intensity (mcd)		Directivity 2θ1/2 (degree)	IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Reflow	
Min.	Typ.					I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)		
7000	8400	120	20	10	15	30	100	15	324	-30~+85	-40~+100	Reflow	
7000	8400	120	20	10	15	30	100	15	324	-30~+85	-40~+100		
6000	7400	120	20	10	15	30	100	15	324	-30~+85	-40~+100		
3600	4800	120	50	10	5	50	100	5	190	-30~+85	-40~+100	Reflow	
2700	3600	120	50	10	5	50	100	5	190	-30~+85	-40~+100		
2000	2500	120	20	10	5	30	100	5	108	-30~+85	-40~+100	Reflow	
1560	2000	120	20	10	5	30	100	5	108	-30~+85	-40~+100		
330	500	120	20	10	5	30	100	5	108	-30~+85	-40~+100		
8400	10000	120	60	10	5	75	100	5	270	-30~+85	-40~+100	Reflow	
7000	8000	120	60	10	5	75	100	5	270	-30~+85	-40~+100		
1560	1900	120	60	10	5	75	100	5	270	-30~+85	-40~+100		
14400	18000	120	3*30	10	5	3*40	3*60	5	3*144	-30~+85	-40~+100		
12000	14400	120	3*30	10	5	3*40	3*60	5	3*144	-30~+85	-40~+100		


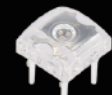


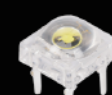





# Surface Mount LED Series

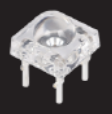
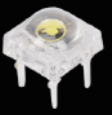





Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Chromaticity Coordinates						
						x			y			
				Typ.	Max.	Min.	Typ	Max.	Min.	Typ	Max.	
<b>0402 SMD</b>												
	OSWA0402C1C	● Pure White	Yellow Diffused	3.2	3.6	0.19	0.24	0.27	0.18	0.23	0.26	
	OSM50402C1C	● Warm White	Yellow Diffused	3.2	3.6	0.40	0.45	0.48	0.38	0.41	0.45	
<b>0603 SMD</b>												
	OSW50603C1E	● Cool White	Yellow Diffused	2.8	3.4	0.23	0.27	0.31	0.24	0.28	0.32	
	OSM50603C1E	● Warm White	Yellow Diffused	2.8	3.4	0.42	0.44	0.47	0.38	0.41	0.43	
	OSK40603C1E	● Pink	Pink Diffused	2.8	3.4	0.27	0.31	0.34	0.16	0.20	0.23	
	OSVX0603C1E	● Violet	Yellow Diffused	2.8	3.4	0.15	0.20	0.22	0.07	0.09	0.11	
	OSB60603C1E	● Ice Blue	Yellow Diffused	2.8	3.4	0.15	0.18	0.20	0.23	0.26	0.28	
<b>0805 SMD</b>												
	OSW50805C1E	● Cool White	Yellow Diffused	3.3	3.6	0.25	0.29	0.31	0.25	0.29	0.31	
	OSM50805C1E	● Warm White	Yellow Diffused	3.3	3.6	0.41	0.44	0.47	0.38	0.41	0.44	
	OSK50805C1E	● Pink	Pink Diffused	3.3	3.6	0.34	0.38	0.40	0.14	0.18	0.20	
<b>1206 SMD</b>												
	OSW51206C1E	● Cool White	Yellow Diffused	3.3	3.6	0.25	0.29	0.33	0.25	0.29	0.33	
	OSM51206C1E	● Warm White	Yellow Diffused	3.3	3.6	0.41	0.44	0.47	0.38	0.41	0.44	
	OSK51206C1E	● Pink	Pink Diffused	3.3	3.6	0.34	0.38	0.40	0.14	0.18	0.20	
<b>0602 Side View SMD</b>												
	OSWA0602C1E	● Pure White	Yellow Diffused	3.0	3.4	0.25	0.29	0.32	0.26	0.29	0.34	
<b>0802 Side View SMD</b>												
	OSW50802C1E	● Cool White	Yellow Diffused	3.0	3.4	0.25	0.29	0.32	0.26	0.29	0.34	
<b>1204 Side View SMD</b>												
	OSWA1204C1E	● Pure White	Yellow Diffused	3.0	3.4	0.25	0.27	0.29	0.26	0.28	0.30	
	OSK41204C1E	● Pink	Pink Diffused	3.0	3.4	0.17	0.22	0.25	0.06	0.08	0.11	
<b>3224 SMD</b>												
	OSW432244E	● Pure White	Yellow Diffused	3.0	3.4	0.29	0.31	0.33	0.32	0.34	0.36	
<b>2016 SMD</b>												
	OSW42016C1A-60MA	● Pure White	Yellow Diffused	3.2	3.8	0.30	0.32	0.34	0.32	0.34	0.37	
	OSM52016C1A-60MA	● Warm White	Yellow Diffused	3.2	3.8	0.40	0.44	0.47	0.37	0.41	0.43	
<b>3014 SMD</b>												
	OSW43014C1A-30MA	● Pure White	Yellow Diffused	3.1	3.6	0.31	0.32	0.33	0.33	0.34	0.35	
	OSM53014C1A-30MA	● Warm White	Yellow Diffused	3.1	3.6	0.40	0.44	0.47	0.36	0.40	0.44	
<b>2835 SMD</b>												
	OSW42835C1H-60MA	● White	Yellow Diffused	3.0	3.4	0.30	0.33	0.36	0.32	0.34	0.37	
	OSM52835C1H-60MA	● Warm White	Yellow Diffused	3.0	3.4	0.40	0.44	0.47	0.37	0.41	0.43	
<b>3020 SMD</b>												
	OSW43020C1C	● Pure White	Yellow Diffused	3.2	3.6	0.30	0.32	0.34	0.32	0.34	0.37	
	OSM53020C1C	● Warm White	Yellow Diffused	3.2	3.6	0.40	0.44	0.47	0.36	0.40	0.44	
<b>5630 SMD</b>												
	OSW35630C1D	● Pure White	Yellow Diffused	3.1	3.6	0.32	0.33	0.35	0.31	0.34	0.36	
	OSM55630C1D	● Warm White	Yellow Diffused	3.1	3.6	0.40	0.44	0.47	0.36	0.40	0.44	
<b>7020 SMD</b>												
	OSW47020C1A	● Pure White	Yellow Diffused	6.0	7.2	0.32	0.33	0.35	0.31	0.34	0.36	
	OSM57020C1A	● Warm White	Yellow Diffused	6.0	7.2	0.40	0.44	0.47	0.36	0.40	0.44	

# Surface Mount LED Series










Luminous Intensity (mcd)	Directivity 2θ1/2 (degree)	IF (mA)	Reverse Current IR Max.(uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting	
					IF (mA)	IFP (mA)	VR (V)	PD (mW)	Topr (°C)	Tstg (°C)		
												Min.
250	400	120	20	10	5	20	100	5	72	-40~+85	-40~+85	Reflow
250	400	120	20	10	5	20	100	5	72	-40~+85	-40~+85	
100	150	120	5	10	5	20	100	5	68	-40~+85	-40~+85	Reflow
60	120	120	5	10	5	20	100	5	68	-40~+85	-40~+85	
50	80	120	5	10	5	20	100	5	68	-40~+85	-40~+85	
70	100	120	5	10	5	20	100	5	68	-40~+85	-40~+85	
80	120	120	5	10	5	20	100	5	68	-40~+85	-40~+85	
350	450	120	20	10	5	30	100	5	108	-40~+85	-40~+85	Reflow
350	450	120	20	10	5	30	100	5	108	-40~+85	-40~+85	
60	90	120	20	10	5	30	100	5	108	-40~+85	-40~+85	
400	450	120	20	10	5	30	100	5	108	-40~+85	-40~+85	Reflow
400	450	120	20	10	5	30	100	5	108	-40~+85	-40~+85	
60	90	120	20	10	5	30	100	5	108	-40~+85	-40~+85	
300	550	120	20	10	5	30	100	5	102	-40~+85	-40~+85	Reflow
300	550	120	20	10	5	25	100	5	108	-40~+85	-40~+85	Reflow
300	450	120	20	10	5	30	100	5	102	-40~+85	-40~+85	Reflow
100	200	120	20	10	5	30	100	5	102	-40~+85	-40~+85	
500	800	35	20	10	5	30	100	5	102	-40~+85	-40~+85	Reflow
7000	8400	120	60	10	5	60	100	5	228	-30~+85	-40~+100	Reflow
5800	7000	120	60	10	5	60	100	5	228	-30~+85	-40~+100	
3000	3500	120	30	10	5	35	100	5	126	-30~+85	-40~+100	Reflow
3000	3500	120	30	10	5	35	100	5	126	-30~+85	-40~+100	
20 lm	22 lm	120	60	10	5	80	150	5	272	-30~+85	-40~+100	Reflow
18 lm	20 lm	120	60	10	5	80	150	5	272	-30~+85	-40~+100	
1600	1800	120	20	10	5	25	100	5	90	-25~+85	-35~+85	Reflow
1600	1800	120	20	10	5	25	100	5	90	-25~+85	-35~+85	
45lm	50lm	120	150	10	5	150	200	5	540	-30~+85	-40~+100	Reflow
40lm	45lm	120	150	10	5	150	200	5	540	-30~+85	-40~+100	
50lm	55lm	120	75	10	5	75	150	5	540	-40~+85	-40~+85	Reflow
45lm	50lm	120	75	10	5	75	150	5	540	-40~+85	-40~+85	

Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Chromaticity Coordinates						
				x			y					
				Typ.	Max.	Min.	Typ	Max.	Min.	Typ	Max.	
<i>3-Chip <math>\Phi 5</math> Type</i>												
	OS4WMEZ2C1P	●	Pure White	Water Clear	3.1	3.6	0.27	0.31	0.35	0.29	0.33	0.37
	OSSWMEZ2C1P	●	Cool White	Water Clear	3.1	3.6	0.23	0.27	0.31	0.24	0.28	0.32
	OSSMMEZ2C1P	●	Warm White	Water Clear	3.1	3.6	0.41	0.44	0.49	0.37	0.41	0.45
<i>3-Chip Arc Type</i>												
	OSW443Z4E1P	●	Pure White	Water Clear	9.3	10.8	0.27	0.31	0.35	0.29	0.33	0.37
	OSW543Z4E1P	●	Cool White	Water Clear	9.3	10.8	0.23	0.27	0.31	0.24	0.28	0.32
	OSM543Z4E1P	●	Warm White	Water Clear	9.3	10.8	0.41	0.45	0.49	0.37	0.41	0.45
	OSW44E4E1P	●	Pure White	Water Clear	3.1	3.6	0.27	0.31	0.35	0.29	0.33	0.37
	OSW54E4E1P	●	Cool White	Water Clear	3.1	3.6	0.23	0.27	0.31	0.24	0.28	0.32
	OSM54E4E1P	●	Warm White	Water Clear	3.1	3.6	0.41	0.45	0.49	0.37	0.41	0.45
	<i><math>\Phi 5</math> Deluxe Power Type</i>											
	OS4WFLZ2C1P	●	Pure White	Water Clear	3.2	3.6	0.27	0.31	0.35	0.29	0.33	0.37
	OS5MFLZ2C1P	●	Warm White	Water Clear	3.2	3.6	0.41	0.45	0.49	0.37	0.41	0.45
	OSW54LZ2C1P	●	Cool White	Water Clear	3.3	3.8	0.23	0.27	0.31	0.24	0.28	0.32
	OSM54LZ2C1P	●	Warm White	Water Clear	3.3	3.8	0.41	0.45	0.49	0.37	0.41	0.45
	OSK54LZ2C1P	●	Pink	Water Clear	3.3	3.8	0.41	0.45	0.49	0.13	0.17	0.21
<i><math>\Phi 3</math> Type</i>												
	OSW54LZ161D	●	Cool White	Water Clear	3.2	3.6	0.23	0.27	0.31	0.24	0.28	0.32
	OSM54LZ161D	●	Warm White	Water Clear	3.2	3.6	0.41	0.45	0.49	0.37	0.41	0.45
	OSK54LZ161D	●	Pink	Water Clear	3.2	3.6	0.41	0.45	0.49	0.13	0.17	0.21
<i>3-Chip <math>\Phi 7</math> Type</i>												
	OS4WMEZ5D1P	●	Pure White	Water Clear	3.0	3.4	0.27	0.31	0.35	0.29	0.33	0.37
	OSSWMEZ5D1P	●	Cool White	Water Clear	3.0	3.4	0.23	0.27	0.31	0.24	0.28	0.32
	OSSMMEZ5D1P	●	Warm White	Water Clear	3.0	3.4	0.41	0.44	0.49	0.37	0.41	0.45
	OS4WM3Z5D1P	●	Pure White	Water Clear	9.0	10.2	0.27	0.31	0.35	0.29	0.33	0.37
	OSSWM3Z5D1P	●	Cool White	Water Clear	9.0	10.2	0.23	0.27	0.31	0.24	0.28	0.32
	OSSMM3Z5D1P	●	Warm White	Water Clear	9.0	10.2	0.41	0.44	0.49	0.37	0.41	0.45
	<i>Arc Type</i>											
	OSW54LZ4E1D	●	Cool White	Water Clear	3.2	3.6	0.23	0.27	0.31	0.24	0.28	0.32
	OSM54LZ4E1D	●	Warm White	Water Clear	3.2	3.6	0.41	0.45	0.49	0.37	0.41	0.45
	OSK54LZ4E1D	●	Pink	Water Clear	3.2	3.6	0.41	0.45	0.49	0.13	0.17	0.21
<i>Flat Type</i>												
	OSW54LZ3K1D	●	Cool White	Water Clear	3.2	3.6	0.23	0.27	0.31	0.24	0.28	0.32
	OSM54LZ3K1D	●	Warm White	Water Clear	3.2	3.6	0.41	0.45	0.49	0.37	0.41	0.45
	OSK54LZ3K1D	●	Pink	Water Clear	3.2	3.6	0.41	0.45	0.49	0.13	0.17	0.21
<i><math>\Phi 5</math> Type</i>												
	OSW54LZ2C1D	●	Cool White	Water Clear	3.2	3.6	0.23	0.27	0.31	0.24	0.28	0.32
	OSM54LZ2C1D	●	Warm White	Water Clear	3.2	3.6	0.41	0.45	0.49	0.37	0.41	0.45
	OSK54LZ2C1D	●	Pink	Water Clear	3.2	3.6	0.41	0.45	0.49	0.13	0.17	0.21

Luminous Intensity (mcd)	Directivity 2 $\theta$ 1/2 (degree)	IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting	
					I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)		
					Min.	Typ.	Min.	Typ.	Max.	Min.		Typ.
19000	21000	120	90	10	5	90	180	5	324	-30~+85	-40~+100	
20000	22000	120	90	10	5	90	180	5	324	-30~+85	-40~+100	
16000	18000	120	90	10	5	90	180	5	324	-30~+85	-40~+100	
7500	10000	140	30	10	15	30	50	15	324	-30~+85	-40~+100	Wave Soldering
7500	10000	140	30	10	15	30	50	15	324	-30~+85	-40~+100	
6500	8500	140	30	10	15	30	50	15	324	-30~+85	-40~+100	
7500	10000	140	90	10	5	90	120	5	324	-30~+85	-40~+100	
7500	10000	140	90	10	5	90	120	5	324	-30~+85	-40~+100	
6500	8500	140	90	10	5	90	120	5	324	-30~+85	-40~+100	
10000	14000	120	50	10	5	60	100	5	216	-30~+85	-40~+100	Wave Soldering
9000	12000	120	50	10	5	60	100	5	216	-30~+85	-40~+100	
10000	12000	120	50	10	5	50	100	5	190	-30~+85	-40~+100	
6000	8600	120	50	10	5	50	100	5	190	-30~+85	-40~+100	
1100	1400	120	50	10	5	50	100	5	190	-30~+85	-40~+100	
10000	12000	60	30	10	5	50	100	5	180	-30~+85	-40~+100	Wave Soldering
7000	8400	60	30	10	5	50	100	5	180	-30~+85	-40~+100	
2400	3000	60	30	10	5	50	100	5	180	-30~+85	-40~+100	
10000	12000	130	90	30	5	90	180	5	306	-30~+85	-40~+100	Wave Soldering
12000	14400	130	90	30	5	90	180	5	306	-30~+85	-40~+100	
8400	10000	130	90	30	15	90	180	15	306	-30~+85	-40~+100	
10000	12000	130	30	10	15	30	60	15	306	-30~+85	-40~+100	
12000	14400	130	30	10	15	30	60	15	306	-30~+85	-40~+100	
8400	10000	130	30	10	15	30	60	15	306	-30~+85	-40~+100	
1870	2400	140	30	10	5	50	100	5	180	-30~+85	-40~+100	
900	1400	140	30	10	5	50	100	5	180	-30~+85	-40~+100	Wave Soldering
260	400	140	30	10	5	50	100	5	180	-30~+85	-40~+100	
1350	1900	180	30	10	5	50	100	5	180	-30~+85	-40~+100	
900	1200	180	30	10	5	50	100	5	180	-30~+85	-40~+100	Wave Soldering
260	360	180	30	10	5	50	100	5	180	-30~+85	-40~+100	
5000	7200	120	30	10	5	50	100	5	180	-30~+85	-40~+100	
2600	4200	120	30	10	5	50	100	5	180	-30~+85	-40~+100	Wave Soldering
900	1200	120	30	10	5	50	100	5	180	-30~+85	-40~+100	









Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Dominant Wavelength wd(nm)		
				Typ.	Max.	Min.	Typ.	Max.
<i>Φ5 Deluxe Power Type</i>								
	OSB56LZ2C1P	Blue	Water Clear	3.2	3.8	465	470	475
	OSG58AZ2C1P	Pure Green	Water Clear	3.2	3.8	520	525	530
	OSR5PAZ2C1P	Red	Water Clear	2.2	2.6	620	625	630
	OSY5PAZ2C1P	Yellow	Water Clear	2.2	2.6	585	590	595
	OSO5PAZ2C1P	Orange	Water Clear	2.2	2.6	600	605	610
	OS5RKAZ2C1P	Red	Water Clear	2.2	2.6	620	625	630
	OS5YKAZ2C1P	Yellow	Water Clear	2.2	2.6	585	590	595
	OSO5CAZ2C1P	Orange	Water Clear	2.2	2.6	600	605	610
<i>Φ7 Deluxe Power Type</i>								
	OSB56LZ5D1P	Blue	Water Clear	3.1	3.6	465	470	475
	OSG58AZ5D1P	Pure Green	Water Clear	3.1	3.6	520	525	530
	OSR5PAZ5D1P	Red	Water Clear	2.4	2.8	619	624	629
	OSY5PAZ5D1P	Yellow	Water Clear	2.4	2.8	585	590	595
	OSO5PAZ5D1P	Orange	Water Clear	2.4	2.8	600	605	610
	OS5RKAZ5D1P	Red	Water Clear	2.4	2.8	619	624	629
	OS5YKAZ5D1P	Yellow	Water Clear	2.4	2.8	585	590	595
	<i>Φ3 Type</i>							
	OSB56LZ161D	Blue	Water Clear	3.2	3.6	465	470	475
	OSG58AZ161D	Pure Green	Water Clear	3.2	3.6	520	525	530
	OSR5PAZ161D	Red	Water Clear	2.2	2.6	620	625	630
	OSY5PAZ161D	Yellow	Water Clear	2.2	2.6	585	590	595
	OSO5PAZ161D	Orange	Water Clear	2.2	2.6	600	605	610
<i>Arc Type</i>								
	OSB56LZ4E1D	Blue	Water Clear	3.2	3.6	465	470	475
	OSG58AZ4E1D	Pure Green	Water Clear	3.2	3.6	520	525	530
	OSR5PAZ4E1D	Red	Water Clear	2.2	2.6	620	625	630
	OSY5PAZ4E1D	Yellow	Water Clear	2.2	2.6	585	590	595
	OSO5PAZ4E1D	Orange	Water Clear	2.2	2.6	600	605	610
<i>Flat Type</i>								
	OSB56LZ3K1D	Blue	Water Clear	3.2	3.6	465	470	475
	OSG58AZ3K1D	Pure Green	Water Clear	3.2	3.6	520	525	530
	OSR5PAZ3K1D	Red	Water Clear	2.2	2.6	620	625	630
	OSY5PAZ3K1D	Yellow	Water Clear	2.2	2.6	585	590	595
	OSO5PAZ3K1D	Orange	Water Clear	2.2	2.6	600	605	610
<i>Concave Deluxe Power Type</i>								
	OS5RKAZJC1P	Red	Water Clear	2.2	2.8	620	625	630
	OS5YKAZJC1P	Yellow	Water Clear	2.2	2.8	585	590	595
<i>Φ5 Type</i>								
	OSB56LZ2C1D	Blue	Water Clear	3.2	3.6	465	470	475
	OSG58AZ2C1D	Pure Green	Water Clear	3.2	3.6	520	525	530
	OSR5PAZ2C1D	Red	Water Clear	2.2	2.6	620	625	630
	OSY5PAZ2C1D	Yellow	Water Clear	2.2	2.6	585	590	595
	OSO5PAZ2C1D	Orange	Water Clear	2.2	2.6	600	605	610
	OSTBMAZ2C1D	Red	Water Clear	2.1	2.6	620	625	630
		Pure Green		3.1	3.6	520	525	530
		Blue		3.1	3.6	465	470	475

Luminous Intensity (mcd)	Directivity 2θ1/2 (degree)	IF (mA)	Reverse Current IR Max.(uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting	
					IF (mA)	IFP (mA)	VR (V)	PD (mW)	Topr (°C)	Tstg (°C)		
Min.	Typ.											
2600	3600	120	50	10	5	50	100	5	190	-30~+85	-40~+100	Wave Soldering
10000	12000	120	50	10	5	50	100	5	190	-30~+85	-40~+100	
3600	4800	120	50	10	5	50	130	5	182	-30~+85	-40~+100	
3600	4800	120	50	10	5	50	130	5	182	-30~+85	-40~+100	
3600	4800	120	50	10	5	50	130	5	182	-30~+85	-40~+100	
8400	10000	120	70	10	5	70	130	5	196	-30~+85	-40~+100	
8400	10000	120	70	10	5	70	130	5	196	-30~+85	-40~+100	
7000	8400	120	70	10	5	70	130	5	182	-30~+85	-40~+100	
750	1120	130	30	10	5	50	100	5	180	-30~+85	-40~+100	Wave Soldering
3000	4200	130	30	10	5	50	100	5	180	-30~+85	-40~+100	
1560	2180	130	50	10	5	50	100	5	140	-30~+85	-40~+100	
1560	2180	130	50	10	5	50	100	5	140	-30~+85	-40~+100	
3000	4800	130	70	10	5	70	120	5	196	-30~+85	-40~+100	
3000	4800	130	70	10	5	70	120	5	196	-30~+85	-40~+100	
4000	5000	60	30	10	5	50	100	5	180	-30~+85	-40~+100	Wave Soldering
12000	15000	60	30	10	5	50	100	5	180	-30~+85	-40~+100	
7000	8400	60	50	10	5	50	120	5	130	-30~+85	-40~+100	
7000	8400	60	50	10	5	50	120	5	130	-30~+85	-40~+100	
500	750	140	30	10	5	50	100	5	180	-30~+85	-40~+100	Wave Soldering
3000	4000	140	30	10	5	50	100	5	180	-30~+85	-40~+100	
750	1200	140	50	10	5	50	120	5	130	-30~+85	-40~+100	
750	1200	140	50	10	5	50	120	5	130	-30~+85	-40~+100	
750	1200	140	50	10	5	50	120	5	130	-30~+85	-40~+100	
500	700	180	30	10	5	50	100	5	180	-30~+85	-40~+100	Wave Soldering
2180	3000	180	30	10	5	50	100	5	180	-30~+85	-40~+100	
750	1000	180	50	10	5	50	120	5	130	-30~+85	-40~+100	
750	1000	180	50	10	5	50	120	5	130	-30~+85	-40~+100	
750	1000	180	50	10	5	50	120	5	130	-30~+85	-40~+100	
2600	3000	120	70	10	5	70	120	5	196	-30~+85	-40~+100	Wave Soldering
2600	3000	120	70	10	5	70	120	5	496	-30~+85	-40~+100	
2180	3000	120	30	10	5	50	100	5	180	-30~+85	-40~+100	Wave Soldering
8400	10000	120	30	10	5	50	100	5	180	-30~+85	-40~+100	
3000	4000	120	50	10	5	50	120	5	130	-30~+85	-40~+100	
3000	4000	120	50	10	5	50	120	5	130	-30~+85	-40~+100	
3000	4000	120	50	10	5	50	120	5	130	-30~+85	-40~+100	
1560	2300	120	20	10	5	50	120	5	130	-30~+85	-40~+100	
3000	4000	120	20	10	5	30	100	5	108	-30~+85	-40~+100	
750	1200	120	20	10	5	30	100	5	108	-30~+85	-40~+100	

Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Color Temperature		
				Typ.	Max.	Min.	Typ.	
<i>1W Tops Power Type</i>								
	OSW4XAT1C1E	●	Pure White	Yellow Diffused	3.3	4.0	6000	6500
	OSM5XAT1C1E	●	Warm White	Yellow Diffused	3.3	4.0	2800	3000
<i>3W Tops Power Type</i>								
	OSW4XAT3C1E	●	Pure White	Yellow Diffused	3.5	4.5	6000	6500
	OSM5XAT3C1E	●	Warm White	Yellow Diffused	3.5	4.5	2800	3000
<i>1W Xeon Power Type</i>								
	OSW4XNE1E1E	●	Pure White	Water Clear	3.3	4.0	6000	6500
	OSM5XNE1E1E	●	Warm White	Water Clear	3.3	4.0	2800	3000
<i>3W Xeon Power Type</i>								
	OSW4XNE3E1E	●	Pure White	Water Clear	3.5	4.5	6000	6500
	OSM5XNE3E1E	●	Warm White	Water Clear	3.5	4.5	2800	3000
<i>1W 3-chip Xeon Power Type</i>								
	OSW4Z3E1E1E	●	Pure White	Water Clear	9.6	11.8	6000	6500
	OSM5Z3E1E1E	●	Warm White	Water Clear	9.6	11.8	2800	3000
Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)		Wavelength		
				Typ.	Max.	Min.	Typ.	
<i>1W Xeon Power Type</i>								
	OSB4XNE1E1E	●	Blue	Water Clear	3.3	4.0	455	460
	OSG5XNE1E1E	●	Pure Green	Water Clear	3.3	4.0	520	525
	OSR5XNE1E1E	●	Red	Water Clear	2.5	3.0	620	625
	OSY5XNE1E1E	●	Yellow	Water Clear	2.5	3.0	585	590
<i>3W Xeon Power Type</i>								
	OSB4XNE3E1E	●	Blue	Water Clear	3.5	4.5	455	460
	OSG5XNE3E1E	●	Pure Green	Water Clear	3.5	4.5	520	525
	OSR5XNE3E1E	●	Red	Water Clear	2.5	3.0	620	625
	OSY5XNE3E1E	●	Yellow	Water Clear	2.5	3.0	585	590
<i>Xeon 1 Power Full Color Type</i>								
	OSTCXBEA1E1E	●	Pure Green	Water Clear	3.3	4.0	520	525
		●	Red		2.5	3.0	620	625
		●	Blue		3.3	4.0	455	460
<i>Tops H Power Full Color Type</i>								
	OSTCXBTHC1E	●	Pure Green	Water Clear	3.1	3.6	520	525
		●	Red		2.1	2.6	620	625
		●	Blue		3.1	3.6	455	460





CCT(K)	Luminous Flux (lm)		Directivity 201/2 (degree)	IF (mA)	Reverse Current IR Max.(uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
	Max.	Min.					Typ.	IF (mA)	IFP (mA)	VR (V)	Pp (mW)	Topr (°C)	
7000	90	100	120	350	10	5	400	500	5	1600	-30~+85	-40~+100	Reflow
3200	80	90	120	350	10	5	400	500	5	1600	-30~+85	-40~+100	
7000	180	200	120	700	10	5	800	1000	5	3600	-30~+85	-40~+100	Reflow
3200	160	180	120	700	10	5	800	1000	5	3600	-30~+85	-40~+100	
7000	110	120	140	350	10	5	400	500	5	1600	-30~+85	-40~+100	Reflow
3200	100	110	140	350	10	5	400	500	5	1600	-30~+85	-40~+100	
7000	200	220	140	700	10	5	800	1000	5	3600	-30~+85	-40~+100	Reflow
3200	190	210	140	700	10	5	800	1000	5	3600	-30~+85	-40~+100	
7000	90	100	140	120	10	15	150	300	15	1770	-30~+85	-40~+100	Hand Soldering
3200	80	90	140	120	10	15	150	300	15	1770	-30~+85	-40~+100	
wd(nm)	Luminous Flux (lm)		Directivity 201/2 (degree)	IF (mA)	Reverse Current IR Max.(uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
Max.	Min.	Typ.					IF (mA)	IFP+1 (mA)	VR (V)	Pp (mW)	Topr (°C)	Tstg (°C)	
465	15	20	140	350	10	5	400	500	5	1600	-30~+85	-40~+100	Reflow
530	70	80	140	350	10	5	400	500	5	1600	-30~+85	-40~+100	
630	40	50	140	350	10	5	400	500	5	1200	-30~+85	-40~+100	
595	40	50	140	350	10	5	400	500	5	1200	-30~+85	-40~+100	
465	30	40	140	700	10	5	800	1000	5	3600	-30~+85	-40~+100	Reflow
530	120	130	140	700	10	5	800	1000	5	3600	-30~+85	-40~+100	
630	70	80	140	700	10	5	800	1000	5	2400	-30~+85	-40~+100	
595	70	80	140	700	10	5	800	1000	5	2400	-30~+85	-40~+100	
530	80	90	140	350	10	5	400	500	5	1600	-30~+85	-40~+100	Reflow
630	40	45	140	350	10	5	400	500	5	1200	-30~+85	-40~+100	
465	15	20	140	350	10	5	400	500	5	1600	-30~+85	-40~+100	
530	20	30	120	150	10	5	200	250	5	720	-30~+85	-40~+100	Reflow
630	15	20	120	150	10	5	200	250	5	520	-30~+85	-40~+100	
465	5	10	120	150	10	5	200	250	5	720	-30~+85	-40~+100	



Package	Part Number	Emitting Color		Lens Type	Forward Voltage VF (V)		CCT(K)		
					Typ.	Max.	Min.	Typ.	Max.
<i>3W MCPCB COB LED</i>									
	OSW41313E1E-2B3C	●	Pure White	Yellow Diffused	10.2	11.4	5500	6500	7500
	OSM51313E1E-2B3C	●	Warm White	Yellow Diffused	10.2	11.4	2800	3000	3200
	OSW41215E1E-2B3C	●	Pure White	Yellow Diffused	10.2	11.4	5500	6500	7500
	OSM51215E1E-2B3C	●	Warm White	Yellow Diffused	10.2	11.4	2800	3000	3200
<i>5W MCPCB COB LED</i>									
	OSW41313E1E-2B5C	●	Pure White	Yellow Diffused	17	19	5500	6500	7500
	OSM51313E1E-2B5C	●	Warm White	Yellow Diffused	17	19	2800	3000	3200
	OSW41215E1E-2B5C	●	Pure White	Yellow Diffused	17	19	5500	6500	7500
	OSM51215E1E-2B5C	●	Warm White	Yellow Diffused	17	19	2800	3000	3200
<i>5W High Power Type</i>									
	OSW4XAH5E1E	●	Pure White	Yellow Diffused	10.0	11.4	6000	6500	7000
	OSM5XAH5E1E	●	Warm White	Yellow Diffused	10.0	11.4	2800	3000	3200
<i>10W High Power Type</i>									
	OSW4XAHAE1E	●	Pure White	Yellow Diffused	11.0	12.6	6000	6500	7000
	OSM5XAHAE1E	●	Warm White	Yellow Diffused	11.0	12.6	2800	3000	3200
<i>25W High Power Type</i>									
	OSW4XAHBE1E	●	Pure White	Yellow Diffused	34	38	6000	6500	7000
	OSM5XAHBE1E	●	Warm White	Yellow Diffused	34	38	2800	3000	3200
<i>50W High Power Type</i>									
	OSW4XAHCE1E	●	Pure White	Yellow Diffused	34	38	6000	6500	7000
	OSM5XAHCE1E	●	Warm White	Yellow Diffused	34	38	2800	3000	3200

Lumen Flux (Lm)		Directivity 2θ1/2 (degree)	IF (mA)	Reverse Current IR Max.(uA)	VR (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
						IF (mA)	IFP (mA)	VR (V)	PD (mW)	Topr (°C)	Tsig (°C)	
Min.	Typ.											
260	300	140	300	20	15	400	600	15	4560	-30~+85	-40~+100	Hand Soldering
230	260	140	300	20	15	400	600	15	4560	-30~+85	-40~+100	
260	300	140	300	20	15	400	600	15	4560	-30~+85	-40~+100	Hand Soldering
230	260	140	300	20	15	400	600	15	4560	-30~+85	-40~+100	
<i>5W MCPCB COB LED</i>												
460	500	140	300	20	25	400	600	25	7600	-30~+85	-40~+100	Hand Soldering
430	460	140	300	20	25	400	600	25	7600	-30~+85	-40~+100	
460	500	140	300	20	25	400	600	25	7600	-30~+85	-40~+100	Hand Soldering
430	460	140	300	20	25	400	600	25	7600	-30~+85	-40~+100	
<i>5W High Power Type</i>												
350	410	140	500	30	15	600	1000	15	6840	-30~+85	-40~+100	Hand Soldering
300	370	140	500	30	15	600	1000	15	6840	-30~+85	-40~+100	
<i>10W High Power Type</i>												
750	850	140	1000	20	15	1400	2000	15	17640	-30~+85	-40~+100	Hand Soldering
670	765	140	1000	20	15	1400	2000	15	17640	-30~+85	-40~+100	
<i>25W High Power Type</i>												
1700	2000	140	750	50	50	1000	1500	50	38000	-30~+85	-40~+100	Hand Soldering
1500	1800	140	750	50	50	1000	1500	50	38000	-30~+85	-40~+100	
<i>50W High Power Type</i>												
3000	3500	140	1500	100	50	2000	2500	50	76000	-30~+85	-40~+100	Hand Soldering
2000	2500	140	1500	100	50	2000	2500	50	76000	-30~+85	-40~+100	

Package	Part Number	Emitting Color	Surface Color	Forward Voltage VF (V)			Dominant Wavelength wd(nm)			Luminous Intensity (mcd)	
				Min	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
<i>0.2Inch Ten Digit Display</i>											
	OSX10201-B	Blue	Black	-	3.1	3.6	-	465	-	-	50
	OSX10201-G	Pure Green	Black	-	3.1	3.6	-	512	-	-	262
	OSX10201-YG	Yellow Green	Black	-	2.1	2.5	-	570	-	-	35
	OSX10201-Y	Yellow	Black	-	2.1	2.5	-	587	-	-	35
	OSX10201-R	Red	Black	-	2.1	2.5	-	632	-	-	35
	OSX10201-GYR1	Yellow Green	Black	-	2.1	2.5	-	570	-	-	35
		Yellow		-	2.1	2.5	-	587	-	-	35
		Red		-	2.1	2.5	-	632	-	-	35
	OSX10201-GGR1	Yellow Green	Black	-	2.1	2.5	-	570	-	-	35
		Yellow Green		-	2.1	2.5	-	570	-	-	35
		Red		-	2.1	2.5	-	632	-	-	35
	OSX10201-RGG1	Red	Black	-	2.1	2.5	-	632	-	-	35
		Yellow Green		-	2.1	2.5	-	570	-	-	35
		Yellow Green		-	2.1	2.5	-	570	-	-	35
	OSX10201-YGR1	Yellow	Black	-	2.1	2.5	-	587	-	-	35
		Yellow Green		-	2.1	2.5	-	570	-	-	35
		Red		-	2.1	2.5	-	632	-	-	35
	OSX10201-RPB1	Red	Black	-	2.1	2.5	-	632	-	-	35
		Pure Green		-	3.1	3.6	-	512	-	-	262
		Blue		-	3.3	3.6	-	465	-	-	50
OSX10201-RGY1	Red	Black	-	2.1	2.5	-	632	-	-	35	
	Yellow Green		-	2.1	2.5	-	570	-	-	35	
	Yellow		-	2.1	2.5	-	587	-	-	35	
OSX10201-RGB1	Red	Black	-	2.1	2.5	-	632	-	-	35	
	Yellow Green		-	2.1	2.5	-	570	-	-	35	
	Blue		-	3.3	3.6	-	465	-	-	50	
<i>3mm Housing LED</i>											
	OSTSLT3E34X-3F3C	Red	Color Diffused	1.8	2.1	2.6	630	635	650	100	150
		Yellow	Color Diffused	1.8	2.1	2.6	585	590	595	100	150
		Yellow Green	Color Diffused	1.8	2.1	2.6	565	570	575	68	100
	OSRGLX3E34X-3F2B	Red	Color Diffused	1.8	2.1	2.6	630	640	650	100	150
		Yellow Green	Color Diffused	1.8	2.1	2.6	565	570	575	68	100
	OSR6LU3E34X-3F1A	Red	Color Diffused	1.8	2.1	2.6	630	640	650	100	150
	OSG8HA3E34X-3F1A	Green	Color Diffused	1.9	2.1	2.6	565	570	575	68	100
OSY5LU3E34X-3F1A	Yellow	Color Diffused	1.8	2.1	2.6	585	590	595	110	220	












Package	Part Number	Receiver Color	Lens Type	Supply Voltage (Vcc)		Peak Wavelength wp(nm)			Reception Distance (m)		Half Angle
				Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	
<i>Infrared Receiver Module</i>											
	OSRB38C9AA	Infrared	Black+Metal Cover	3	5.5	-	940	-	15	20	90
	OSRB38C9AB	Infrared	Black+Metal Cover	3	5.5	-	940	-	15	20	90
	OSRB38C9BA	Infrared	Black	3	5.5	-	940	-	15	20	90
	OSRB38C9BB	Infrared	Black	3	5.5	-	940	-	15	20	90

Directivity 2θ1/2 (degree)	IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
				I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>sig</sub> (°C)	
-	20	10	5	20	100	5	72	-30~+70	-40~+85	Wave Soldering
-	20	10	5	20	100	5	72	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	62.5	-30~+70	-40~+85	
-	20	10	5	20	100	5	72	-30~+70	-40~+85	

30	20	10	5	20	100	5	78	-30~+85	-40~+100	Hand Soldering
30	20	10	5	20	100	5	78	-30~+85	-40~+100	
30	20	10	5	20	100	5	78	-30~+85	-40~+100	
30	20	10	5	20	100	5	78	-30~+85	-40~+100	
30	20	10	5	20	100	5	78	-30~+85	-40~+100	
30	20	10	5	20	100	5	78	-30~+85	-40~+100	
30	20	10	5	20	100	5	78	-30~+85	-40~+100	
30	20	10	5	20	100	5	78	-30~+85	-40~+100	
30	20	10	5	20	100	5	78	-30~+85	-40~+100	
30	20	10	5	20	100	5	78	-30~+85	-40~+100	

B.P.F. Center Frequency (KHz)	View	Current Consumption (mA)	Low level Output Voltage (V)	Burst width tolerance (us)		Absolute Maximum Rating (Ta=25°C)			Mounting
				Typ	Max	V <sub>cc</sub> (v)	T <sub>opr</sub> (°C)	T <sub>sig</sub> (°C)	
37.9	Side view	0.9	0.2	600	800	6	-10~+60	-20~+75	Wave Soldering
37.9	Top view	0.9	0.2	600	800	6	-10~+60	-20~+75	
37.9	Side view	0.9	0.2	600	800	6	-10~+60	-20~+75	
37.9	Top view	0.9	0.2	600	800	6	-10~+60	-20~+75	

# LED Module For Lighting & Indicating

Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)	Chromaticity Coordinates				
					x		y		
Wire:100mm				Typ.	Min.	Typ.	Max.	Min.	
<i>DC 12V LED Module For Lighting</i>									
	OSW5G45161A-CCW	●	Cool White	Water Clear	12	0.23	0.27	0.31	0.24
	OSM5G45161A-CCW	●	Warm White	Water Clear	12	0.41	0.45	0.49	0.37
<i>DC 24V LED Module For Lighting</i>									
	OS5WNL5161A-KKW	●	Cool White	Water Clear	24	0.23	0.27	0.31	0.24
	OS5MNL5161A-KKW	●	Warm White	Water Clear	24	0.41	0.45	0.49	0.37
<i>AC 110V LED Module For Lighting</i>									
	OS5W7L5161A-PPW	●	Cool White	Water Clear	110	0.23	0.27	0.31	0.24
	OS5M7L5161A-PPW	●	Warm White	Water Clear	110	0.41	0.45	0.49	0.37
Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)	Chromaticity Coordinates				
Wire:100mm					x		y		
				Typ.	Min.	Typ.	Max.	Min.	
<i>DC 12V LED Module For Indicating</i>									
	OSW5DK5111A-CCW	●	Cool White	Water Clear	12	0.23	0.27	0.31	0.24
	OSM5DK5111A-CCW	●	Warm White	Water Clear	12	0.41	0.45	0.49	0.37
<i>DC 24V LED Module For Indicating</i>									
	OSW5DK5111A-KKW	●	Cool White	Water Clear	24	0.23	0.27	0.31	0.24
	OSM5DK5111A-KKW	●	Warm White	Water Clear	24	0.41	0.45	0.49	0.37
<i>AC 110V LED Module For Indicating</i>									
	OSWWD25111A-PPW	●	Cool White	Water Clear	110	0.23	0.27	0.31	0.24
	OSMMD25111A-PPW	●	Warm White	Water Clear	110	0.41	0.45	0.49	0.37
<i>AC 220V LED Module For Indicating</i>									
	OSWWD25111A-QQW	●	Cool White	Water Clear	220	0.23	0.27	0.31	0.24
	OSMMD25111A-QQW	●	Warm White	Water Clear	220	0.41	0.45	0.49	0.37
Package	Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)	Dominant Wavelength				
Wire:100mm					Typ.				
					Min.	Typ.			
<i>DC 12V LED Module For Indicating</i>									
	OSB5SA5111A-CCW	●	Blue	Water Clear	12	465	470		
	OSG5DA5111A-CCW	●	Pure Green	Water Clear	12	520	525		
	OSG8JA5111A-CCW	●	Yellow Green	Water Clear	12	565	570		
	OSY5JA5111A-CCW	●	Yellow	Water Clear	12	585	590		
	OSO5JA5111A-CCW	●	Orange	Water Clear	12	600	605		
	OSR5JA5111A-CCW	●	Red	Water Clear	12	620	625		
<i>DC 24V LED Module For Indicating</i>									
	OSB5SA5111A-KKW	●	Blue	Water Clear	24	465	470		
	OSG5DA5111A-KKW	●	Pure Green	Water Clear	24	520	525		
	OSG8JA5111A-KKW	●	Yellow Green	Water Clear	24	565	570		
	OSY5JA5111A-KKW	●	Yellow	Water Clear	24	585	590		
	OSO5JA5111A-KKW	●	Orange	Water Clear	24	600	605		
	OSR5JA5111A-KKW	●	Red	Water Clear	24	620	625		
<i>AC 110V LED Module For Indicating</i>									
	OSBBS25111A-PPW	●	Blue	Water Clear	110	465	470		
	OSPPD25111A-PPW	●	Pure Green	Water Clear	110	520	525		
	OSGGJ25111A-PPW	●	Yellow Green	Water Clear	110	565	570		
	OSYYJ25111A-PPW	●	Yellow	Water Clear	110	585	590		
	OSOOJ25111A-PPW	●	Orange	Water Clear	110	600	605		
	OSRRJ25111A-PPW	●	Red	Water Clear	110	620	625		
<i>AC 220V LED Module For Indicating</i>									
	OSBBS25111A-QQW	●	Blue	Water Clear	220	465	470		
	OSPPD25111A-QQW	●	Pure Green	Water Clear	220	520	525		
	OSGGJ25111A-QQW	●	Yellow Green	Water Clear	220	565	570		
	OSYYJ25111A-QQW	●	Yellow	Water Clear	220	585	590		
	OSOOJ25111A-QQW	●	Orange	Water Clear	220	600	605		
	OSRRJ25111A-QQW	●	Red	Water Clear	220	620	625		

# LED Module For Lighting & Indicating

y	Luminous Flux (lm)	Directivity 2θ1/2 (degree)	IF (mA)			Reverse Current I <sub>R</sub> Max.(uA)	Absolute Maximum Rating (Ta=25°C)						Mounting			
			I <sub>F</sub> (mA)	I <sub>P</sub> (mA)	V <sub>F</sub> (V)		P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)							
Type	Max.	Min.	Typ.	Max	Min.	Typ.	Max	Max.(uA)	(mA)	(mA)	(V)	(mW)	(°C)	(°C)		
0.28	0.32	26	28	-	60	13	15	20	-	20	-	14	280	-30~+85	-30~+85	Hand Soldering
0.41	0.45	22	24	-	60	13	15	20	-	20	-	14	280	-30~+85	-30~+85	
0.28	0.32	28	30	-	60	8	9	10	-	10	-	28	280	-30~+85	-30~+85	Hand Soldering
0.41	0.45	23	25	-	60	8	9	10	-	10	-	28	280	-30~+85	-30~+85	
0.28	0.32	28	30	-	60	5	6	7	-	7	-	115	805	-30~+85	-30~+85	Hand Soldering
0.41	0.45	23	25	-	60	5	6	7	-	7	-	115	805	-30~+85	-30~+85	
y	Luminous Intensity (mcd)				Directivity 2θ1/2 (degree)	IF (mA)			Reverse Current I <sub>R</sub> Max.(uA)	Absolute Maximum Rating (Ta=25°C)						Mounting
Type	Max.	Min.	Typ.	Max		Min.	Typ.	Max		I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>F</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	
0.28	0.32	10000	12000	14400	15	6	7	8	-	8.0	-	14	112	-30~+85	-30~+85	Hand Soldering
0.41	0.45	8400	10000	12000	15	6	7	8	-	8.0	-	14	112	-30~+85	-30~+85	
0.28	0.32	10000	12000	14400	15	6	7	8	-	8.0	-	28	224	-30~+85	-30~+85	Hand Soldering
0.41	0.45	8400	10000	12000	15	6	7	8	-	8.0	-	28	224	-30~+85	-30~+85	
0.28	0.32	1120	1560	2180	15	0.7	0.9	1.0	-	1.0	-	120	120	-30~+85	-30~+85	Hand Soldering
0.41	0.45	750	1120	1560	15	0.7	0.9	1.0	-	1.0	-	120	120	-30~+85	-30~+85	
0.28	0.32	1120	1560	2180	15	0.7	0.9	1.0	-	1.0	-	230	230	-30~+85	-30~+85	Hand Soldering
0.41	0.45	750	1120	1560	15	0.7	0.9	1.0	-	1.0	-	230	230	-30~+85	-30~+85	
wd(nm)	Luminous Intensity (mcd)				Directivity 2θ1/2 (degree)	IF (mA)			Reverse Current I <sub>R</sub> Max.(uA)	Absolute Maximum Rating (Ta=25°C)						Mounting
Max.	Min.	Typ.	Max	Min.		Typ.	Max	I <sub>F</sub> (mA)		I <sub>FP</sub> (mA)	V <sub>F</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)		
475	3000	4200	5800	15	6	7	8	-	8	-	14	112	-30~+85	-30~+85	Hand Soldering	
530	12000	14400	18000	15	6	7	8	-	8	-	14	112	-30~+85	-30~+85		
575	330	500	750	15	6	7	8	-	8	-	14	112	-30~+85	-30~+85		
595	1120	1560	2180	15	6	7	8	-	8	-	14	112	-30~+85	-30~+85		
610	1560	2180	3000	15	6	7	8	-	8	-	14	112	-30~+85	-30~+85		
630	1120	1560	2180	15	6	7	8	-	8	-	14	112	-30~+85	-30~+85		
475	3000	4200	5800	15	6	7	8	-	8	-	28	224	-30~+85	-30~+85	Hand Soldering	
530	12000	14400	18000	15	6	7	8	-	8	-	28	224	-30~+85	-30~+85		
575	330	500	750	15	6	7	8	-	8	-	28	224	-30~+85	-30~+85		
595	1120	1560	2180	15	6	7	8	-	8	-	28	224	-30~+85	-30~+85		
610	1560	2180	3000	15	6	7	8	-	8	-	28	224	-30~+85	-30~+85		
630	1120	1560	2180	15	6	7	8	-	8	-	28	224	-30~+85	-30~+85		
475	750	1120	1560	15	0.7	0.9	1.0	-	1	-	120	120	-30~+85	-30~+85	Hand Soldering	
530	1120	1560	2180	15	0.7	0.9	1.0	-	1	-	120	120	-30~+85	-30~+85		
575	20	40	50	15	0.7	0.9	1.0	-	1	-	120	120	-30~+85	-30~+85		
595	100	150	220	15	0.7	0.9	1.0	-	1	-	120	120	-30~+85	-30~+85		
610	150	220	330	15	0.7	0.9	1.0	-	1	-	120	120	-30~+85	-30~+85		
630	100	150	220	15	0.7	0.9	1.0	-	1	-	120	120	-30~+85	-30~+85		
475	750	1120	1560	15	0.7	0.9	1.0	-	1	-	230	230	-30~+85	-30~+85	Hand Soldering	
530	1120	1560	2180	15	0.7	0.9	1.0	-	1	-	230	230	-30~+85	-30~+85		
575	20	40	50	15	0.7	0.9	1.0	-	1	-	230	230	-30~+85	-30~+85		
595	100	150	220	15	0.7	0.9	1.0	-	1	-	230	230	-30~+85	-30~+85		
610	150	220	330	15	0.7	0.9	1.0	-	1	-	230	230	-30~+85	-30~+85		
630	100	150	220	15	0.7	0.9	1.0	-	1	-	230	230	-30~+85	-30~+85		

# Constant Current & Low Voltage LED Series

Package		Part Number	Emitting Color	Lens Type	Forward Voltage VF (V)			Dominant Wavelength wd(nm)			Luminous Intensity (mcd)		
Pin Type (Pin:13mm)	Wire Type (Wire:40mm)				Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	
<b>5mm Constant Current 4.5-18V LED</b>													
		OSW4DK5111A-5JP/5JW	Pure White	Water Clear	4.5	-	18	X=0.31, Y=0.33			18000	20000	
		OSW5DK5111A-5JP/5JW	Cool White	Water Clear	4.5	-	18	X=0.27, Y=0.28			20000	22000	
		OSM5DK5111A-5JP/5JW	Warm White	Water Clear	4.5	-	18	X=0.45, Y=0.41			15000	18000	
		OSB5SA5111A-5JP/5JW	Blue	Water Clear	4.5	-	18	465	470	475	5800	7000	
		OSG5DA5111A-5JP/5JW	Pure Green	Water Clear	4.5	-	18	520	525	530	20000	22000	
		OSY5PA5111A-5JP/5JW	Yellow	Water Clear	4.5	-	18	585	590	595	18000	20000	
		OSO5PA5111A-5JP/5JW	Orange	Water Clear	4.5	-	18	600	605	610	20000	22000	
		OSR5PA5111A-5JP/5JW	Red	Water Clear	4.5	-	18	620	625	630	18000	20000	
<b>5mm Single Color Standard Low Voltage LED</b>													
		OSW4DK5111A-1V/W1V	Pure White	Water Clear	1.2	X=0.31, Y=0.33			20000	22000			
		OSW5DK5111A-1V/W1V	Cool White	Water Clear	1.2	X=0.27, Y=0.28			22000	25000			
		OSM5DK5111A-1V/W1V	Warm White	Water Clear	1.2	X=0.45, Y=0.41			18000	20000			
		OSB5SA5111A-1V/W1V	Blue	Water Clear	1.2	465	470	475	7000	8400			
		OSG5DA5111A-1V/W1V	Pure Green	Water Clear	1.2	520	525	530	22000	25000			
		OSY5PA5111A-1V/W1V	Yellow	Water Clear	1.2	585	590	595	20000	22000			
		OSO5PA5111A-1V/W1V	Orange	Water Clear	1.2	600	605	610	22000	25000			
		OSR5PA5111A-1V/W1V	Red	Water Clear	1.2	620	625	630	20000	22000			
<b>5mm Single Color Flashing Low Voltage LED</b>													
		OSW5DS5A31A-1V/W1V	Cool White	Water Clear	1.2	X=0.27, Y=0.28			2180	3000			
		OSM5DS5A31A-1V/W1V	Warm White	Water Clear	1.2	X=0.45, Y=0.41			1800	2500			
		OSB5SS5A31A-1V/W1V	Blue	Water Clear	1.2	465	470	475	1120	1560			
		OSG5DS5A31A-1V/W1V	Pure Green	Water Clear	1.2	520	525	530	2180	3000			
		OSY5MS5A31A-1V/W1V	Yellow	Water Clear	1.2	585	590	595	2180	2800			
		OSO5MS5A31A-1V/W1V	Orange	Water Clear	1.2	600	605	610	2180	2800			
		OSR5MS5A31A-1V/W1V	Red	Water Clear	1.2	620	625	630	2180	2800			
		OSW5DR5A31A-1V/W1V	Cool White	Water Clear	1.2	X=0.27, Y=0.28			2180	3000			
		OSM5DR5A31A-1V/W1V	Warm White	Water Clear	1.2	X=0.45, Y=0.41			1800	2500			
		OSB5SR5A31A-1V/W1V	Blue	Water Clear	1.2	465	470	475	1120	1560			
		OSG5DR5A31A-1V/W1V	Pure Green	Water Clear	1.2	520	525	530	2180	3000			
		OSY5MR5A31A-1V/W1V	Yellow	Water Clear	1.2	585	590	595	2180	2800			
		OSO5MR5A31A-1V/W1V	Orange	Water Clear	1.2	600	605	610	2180	2800			
		OSR5MR5A31A-1V/W1V	Red	Water Clear	1.2	620	625	630	2180	2800			
		<b>5mm Bi-color Flashing Low Voltage LED</b>											
				OSBWDS5A31A-1V/W1V	Cool White	Water Clear	1.2	X=0.27, Y=0.28			1120	1560	
				Blue	1.2		460	465	475	750	1120		
				OSRPMS5A31A-1V/W1V	Red	Water Clear	1.2	620	625	630	1560	2180	
Pure Green	1.2			520	525		530	2180	3000				
OSRBMS5A31A-1V/W1V	Red			Water Clear	1.2	620	625	630	1560	2180			
Blue	1.2				465	475	475	750	1120				
OSBWDS5A32A-1V/W1V	Cool White			White Diffused	1.2	X=0.27, Y=0.28			750	1120			
Blue	1.2				460	465	475	500	750				
OSRPMS5A32A-1V/W1V	Red			White Diffused	1.2	620	625	630	750	1120			
Pure Green	1.2				520	525	530	1120	1560				
OSRBMS5A32A-1V/W1V	Red			White Diffused	1.2	620	625	630	750	1120			
Blue	1.2				465	470	475	500	750				
<b>5mm RGB Color Flashing Low Voltage LED</b>													
		OST1MC5A32A-1V/W1V	Red	White Diffused	1.2	620	625	630	750	1120			
		Pure Green	1.2		520	525	530	1120	1560				
		Blue	1.2		465	470	475	500	750				
		OST1MA5A32A-1V/W1V	Red	White Diffused	1.2	620	625	630	750	1120			
		Pure Green	1.2		520	525	530	1120	1560				
		Blue	1.2		465	470	475	500	750				
		OST1MC5A31A-1V/W1V	Red	Water Clear	1.2	620	625	630	1560	2180			
		Pure Green	1.2		520	525	530	2180	3000				
		Blue	1.2		465	470	475	750	1120				
		OST1MA5A31A-1V/W1V	Red	Water Clear	1.2	620	625	630	1560	2180			
		Pure Green	1.2		520	525	530	2180	3000				
		Blue	1.2		465	470	475	750	1120				

# Constant Current & Low Voltage LED Series

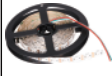
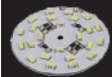



Directivity 201/2 (degree)	IF (mA)	Reverse Current I <sub>R</sub> Max.(uA)	V <sub>R</sub> (V)	Absolute Maximum Rating (Ta=25°C)						Mounting
				I <sub>F</sub> (mA)	I <sub>FP</sub> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	
15	18.5	-	-	19	-	-	342	-30~+85	-30~+85	Hand Soldering
15	18.5	-	-	19	-	-	342	-30~+85	-30~+85	
15	18.5	-	-	19	-	-	342	-30~+85	-30~+85	
15	18.5	-	-	19	-	-	342	-30~+85	-30~+85	
15	18.5	-	-	19	-	-	342	-30~+85	-30~+85	
15	18.5	-	-	19	-	-	342	-30~+85	-30~+85	
15	18.5	-	-	19	-	-	342	-30~+85	-30~+85	
15	18.5	-	-	19	-	-	342	-30~+85	-30~+85	
Directivity 201/2 (degree)	IF (mA)	Blinking Cycle	Duty Cycle	Absolute Maximum Rating (Ta=25°C)						Mounting
V <sub>DD</sub> (V)	I <sub>FP</sub> <sup>1</sup> (mA)	V <sub>R</sub> (V)	P <sub>D</sub> (mW)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)					
15	64±10	-	-	1.5	114	-	171	-30~+85	-30~+85	Hand Soldering
15	64±10	-	-	1.5	114	-	171	-30~+85	-30~+85	
15	64±10	-	-	1.5	114	-	171	-30~+85	-30~+85	
15	64±10	-	-	1.5	114	-	171	-30~+85	-30~+85	
15	64±10	-	-	1.5	114	-	171	-30~+85	-30~+85	
15	76±10	-	-	1.5	114	-	171	-30~+85	-30~+85	
15	76±10	-	-	1.5	114	-	171	-30~+85	-30~+85	
15	76±10	-	-	1.5	114	-	171	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	Hand Soldering
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	1.8HZ	1/2	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	12S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	12S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	12S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	12S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	12S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	12S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	12S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	12S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	12S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	12S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	12S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	12S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	33S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	33S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	33S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	33S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	33S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	33S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	33S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	33S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	33S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	33S	-	1.5	-	-	-	-30~+85	-30~+85	
30	20±5	33S	-	1.5	-	-	-	-30~+85	-30~+85	



Package	Part Number	Emitting Color		Control Voltage VF (V)	Dominant Wavelength wd(nm)		
				Typ.	Min.	Typ.	Max.
<i>E10 AC/DC Screw LED</i>							
	SAP24-WWD28B31F	●	White	AC/DC24V	8000-17000K		
	SAP24-MMD28B31F	●	Warm White	AC/DC24V	2500-3500K		
	SAP24-BBS28B31F	●	Blue	AC/DC24V	465	470	475
	SAP24-GGG28B31F	●	Pure Green	AC/DC24V	520	525	530
	SAP24-YYM28B31B	●	Yellow	AC/DC24V	585	590	595
	SAP24-RRM28B31B	●	Red	AC/DC24V	620	625	630
<i>E10 DC Screw LED</i>							
	OPDK-W5DK8B31F	●	White	DC12V	8000-17000K		
	OPDK-M5DK8B31F	●	Warm White	DC12V	2500-3500K		
	OPDK-B5SA8B31F	●	Blue	DC12V	465	470	475
	OPDK-G5DA8B31F	●	Pure Green	DC12V	520	525	530
	OPDK-5YPM8B31F	●	Yellow	DC12V	585	590	595
	OPDK-5RPM8B31F	●	Red	DC12V	620	625	630
<i>E10 Current Regulative Screw LED</i>							
	OPDD-W5DK8B31B-CRLED18	●	White	DC5.5~20V	8000-17000K		
	OPDD-M5DK8B31B-CRLED18	●	Warm White	DC5.5~20V	2500-3500K		
	OPDD-B5SA8B31B-CRLED18	●	Blue	DC5.5~20V	465	470	475
	OPDD-G5DA8B31B-CRLED18	●	Pure Green	DC5.5~20V	520	525	530
	OPDD-Y5MA8B31B-CRLED18	●	Yellow	DC5.5~20V	585	590	595
	OPDD-R5MA8B31B-CRLED18	●	Red	DC5.5~20V	620	625	630

Luminous Intensity (mcd)	Directivity 2θ1/2 (degree)	IF (mA)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	Mounting
20000	30	20	-30 ~ +85	-40 ~ +100	Hand Soldering
10000	30	20	-30 ~ +85	-40 ~ +100	
7000	30	20	-30 ~ +85	-40 ~ +100	
20000	30	20	-30 ~ +85	-40 ~ +100	
10000	30	20	-30 ~ +85	-40 ~ +100	
10000	30	20	-30 ~ +85	-40 ~ +100	
25000	30	20	-30 ~ +85	-40 ~ +100	Hand Soldering
14400	30	20	-30 ~ +85	-40 ~ +100	
8000	30	20	-30 ~ +85	-40 ~ +100	
25000	30	20	-30 ~ +85	-40 ~ +100	
15000	30	20	-30 ~ +85	-40 ~ +100	
15000	30	20	-30 ~ +85	-40 ~ +100	
12000	30	16	-30 ~ +85	-40 ~ +100	Hand Soldering
8000	30	16	-30 ~ +85	-40 ~ +100	
6500	30	16	-30 ~ +85	-40 ~ +100	
12000	30	16	-30 ~ +85	-40 ~ +100	
7500	30	16	-30 ~ +85	-40 ~ +100	
7500	30	16	-30 ~ +85	-40 ~ +100	

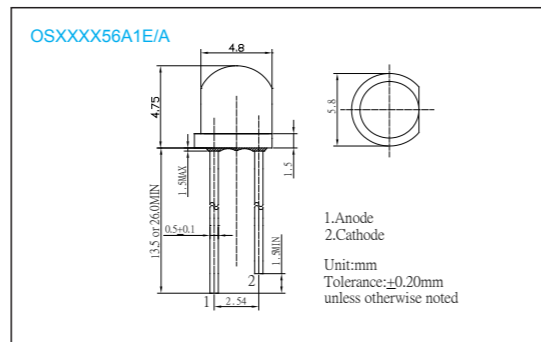
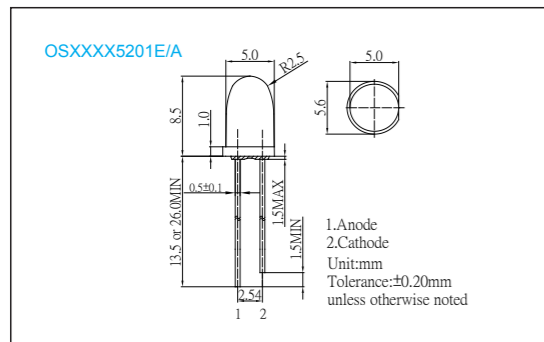
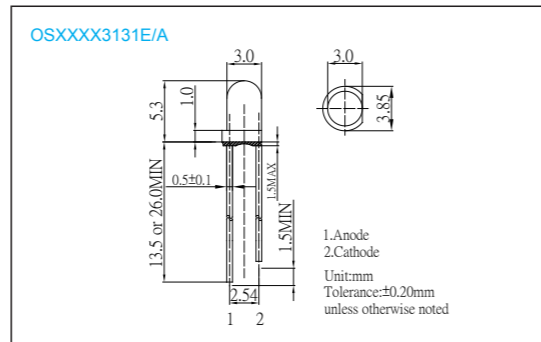
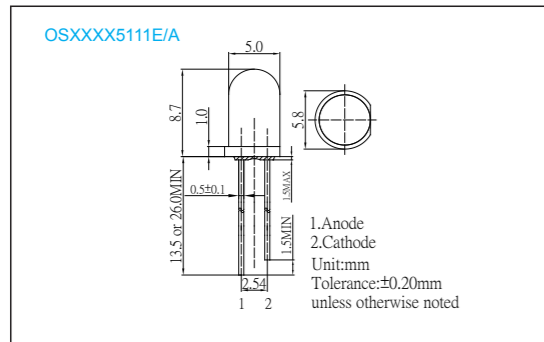
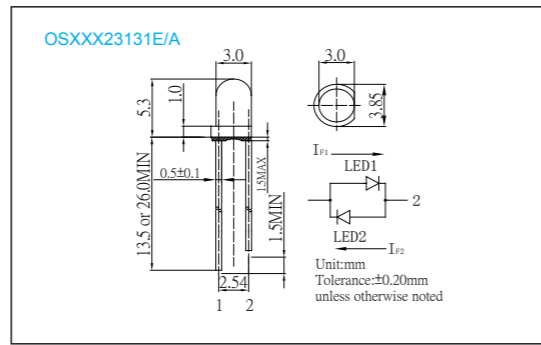
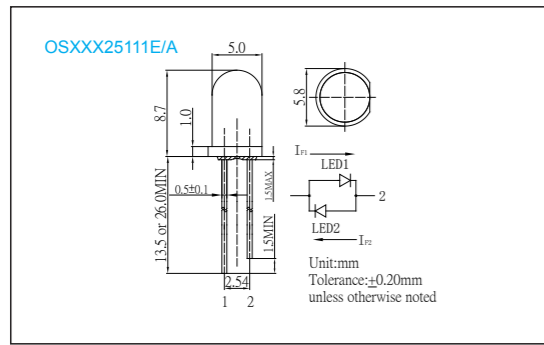
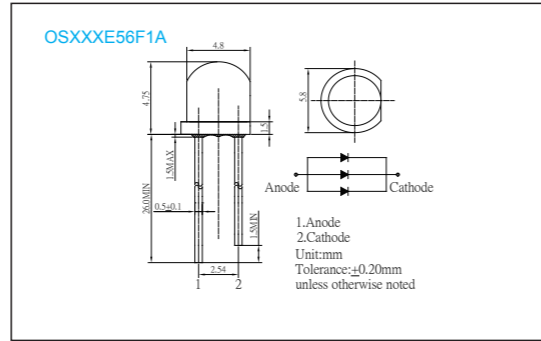
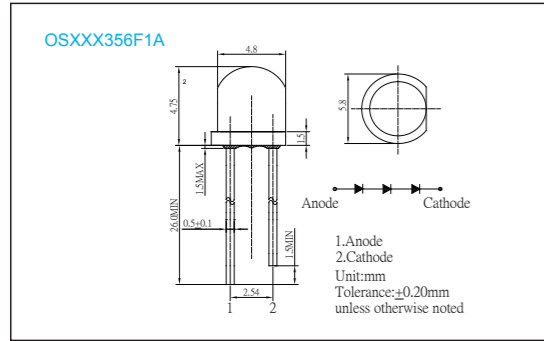
# LED Strip

Package	Part Number	Emitting Color		Forward Voltage VF (V)	Dominant Wavelength wd(nm)		
				Typ.	Min.	Typ.	Max.
<i>LED Light Strip 60 x SMD3528 /Meter</i>							
	OSW0W536	●	Cool White	DC12V	8500-10000-20000K		
	OSW0M536	●	Warm White	DC12V	2500-3000-3500K		
	OSW0B536	●	Blue	DC12V	465	470	475
	OSW0G536	●	Pure Green	DC12V	520	525	530
	OSW0Y536	●	Yellow	DC12V	585	590	595
	OSW0R536	●	Red	DC12V	620	625	630
<i>LED Light Strip 60 x SMD5050 /Meter</i>							
	OSW0W556	●	Pure White	DC12V	5500-6500-8500K		
	OSW0M556	●	Warm White	DC12V	2700-3000-3200K		
	OSW0B556	●	Blue	DC12V	465	470	475
	OSW0G556	●	Pure Green	DC12V	520	525	530
	OSW0Y556	●	Yellow	DC12V	585	590	595
	OSW0R556	●	Red	DC12V	620	625	630
	OSW0TC56	●	Red	DC12V	620	625	630
		●	Green		520	525	530
●		Blue	465		470	475	
<i>Ultra Thin Circular LED Module</i>							
	OERS24W414	●	White	12V	5500K-6500K		
	OERS16W414	●	White	12V	5500K-6500K		
	OERS08W414	●	White	12V	5500K-6500K		
<i>Ultra Thin Cutable Rigid LED Bar</i>							
	OERBW0W428	●	White	12V	5500K-6500K-8500K		
	OERBW0M528	●	Warm White	12V	3000K-3500K-4000K		
	OERBW0W414	●	White	12V	5500K-6500K-8500K		
	OERBW0M514	●	Warm White	12V	3000K-3500K-4000K		
<i>Bendable RGB LED Flashing Mini String</i>							
	OSMST1100FD	●	Red	12V	620	625	630
		●	Green		520	525	530
		●	Blue		465	470	475
	OSMST120EB	●	Red	4.5V	620	625	630
		●	Green		520	525	530
		●	Blue		465	470	475

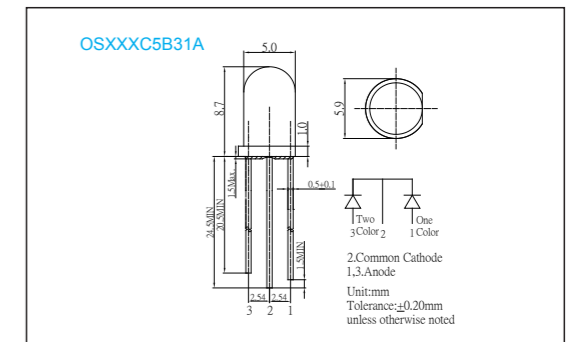
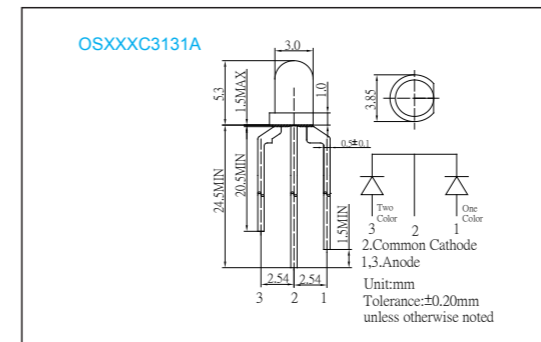
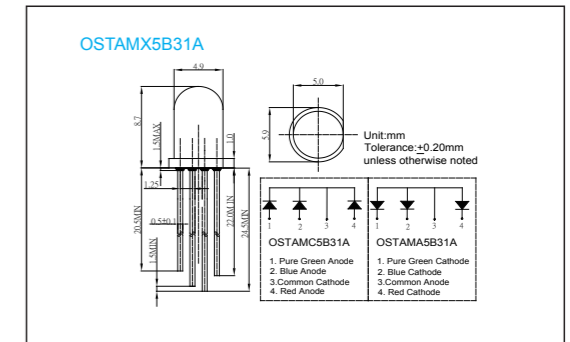
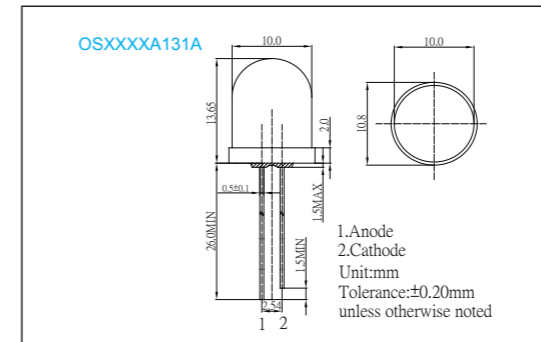
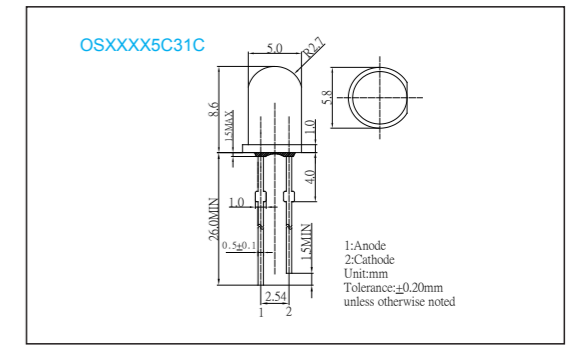
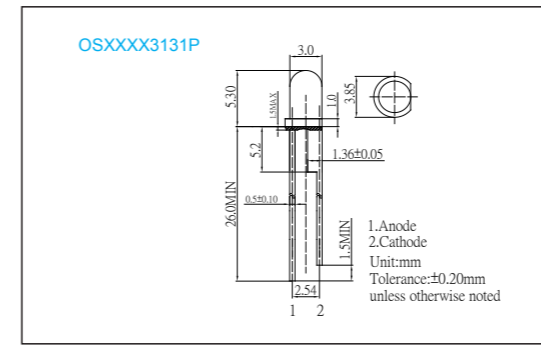
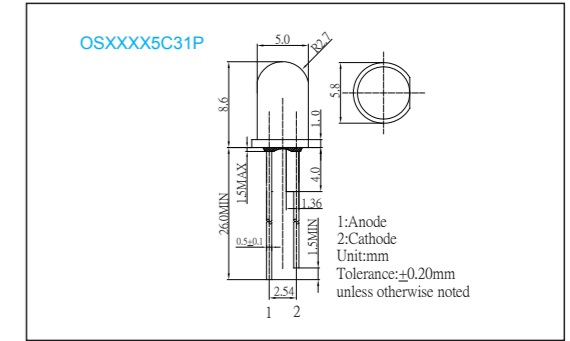
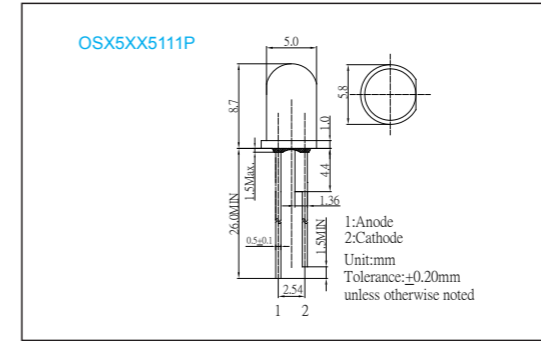
# LED Strip

Luminous Intensity (mcd)	Directivity 2θ1/2 (degree)	IF (mA)	T <sub>opr</sub> (°C)	T <sub>stg</sub> (°C)	Mounting
Typ.					
1700	120	400	-30~+85	-40~+100	<b>Hand Soldering</b>
1400	120	400	-30~+85	-40~+100	
305	120	400	-30~+85	-40~+100	
600	120	400	-30~+85	-40~+100	
375	120	400	-30~+85	-40~+100	
400	120	400	-30~+85	-40~+100	
12-14lm	120	1200	-30~+85	-40~+100	<b>Hand Soldering</b>
11-13lm	120	1200	-30~+85	-40~+100	
755	120	1200	-30~+85	-40~+100	
1500	120	1200	-30~+85	-40~+100	
875	120	1200	-30~+85	-40~+100	
900	120	1200	-30~+85	-40~+100	
180	120	1200	-30~+85	-40~+100	
900	120	1200	-30~+85	-40~+100	
200	120	1200	-30~+85	-40~+100	
288lm	120	125	-30~+85	-40~+100	<b>Hand Soldering</b>
192lm	120	84	-30~+85	-40~+100	
96lm	120	42	-30~+85	-40~+100	
19-21lm	120	1200	-30~+85	-40~+100	<b>Hand Soldering</b>
19-22lm	120	1200	-30~+85	-40~+100	
8-9lm	120	1000	-30~+85	-40~+100	
9-10lm	120	1000	-30~+85	-40~+100	
100	120	370	-30~+85	-40~+100	<b>Hand Soldering</b>
360	120	370	-30~+85	-40~+100	
90	120	370	-30~+85	-40~+100	
100	120	130	-30~+85	-40~+100	
360	120	130	-30~+85	-40~+100	
90	120	130	-30~+85	-40~+100	

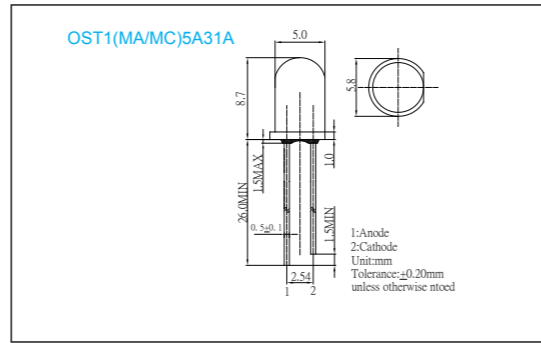
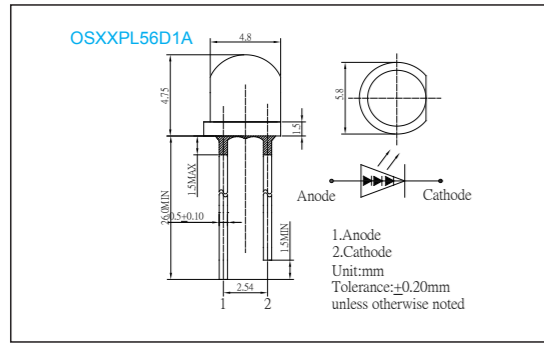
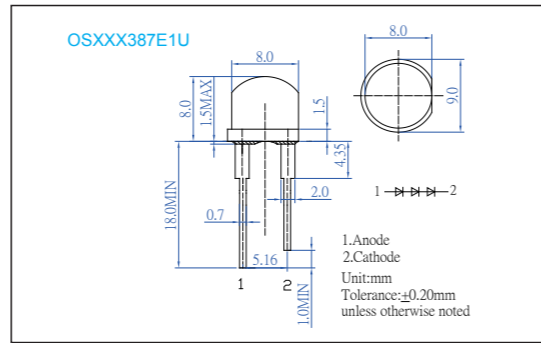
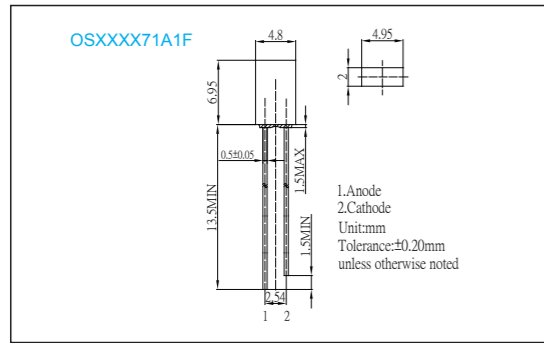
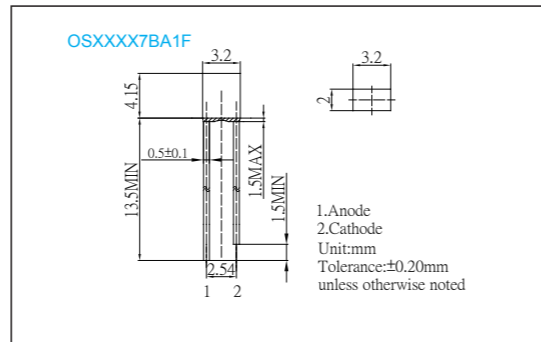
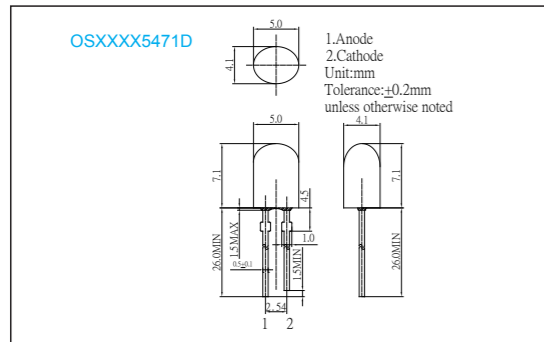
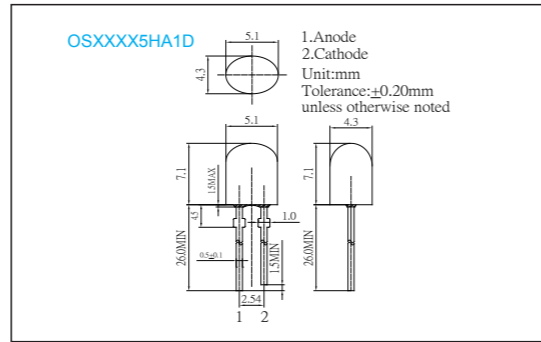
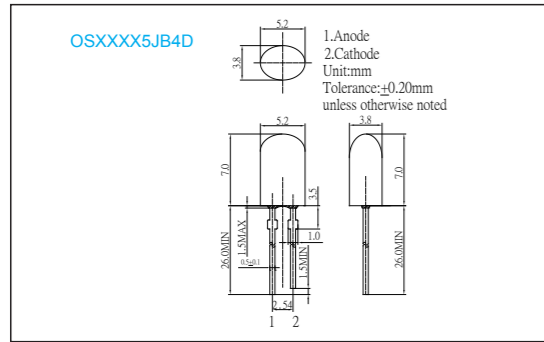
# Outline Dimensions



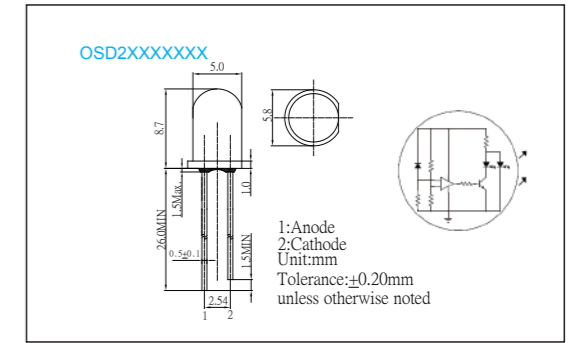
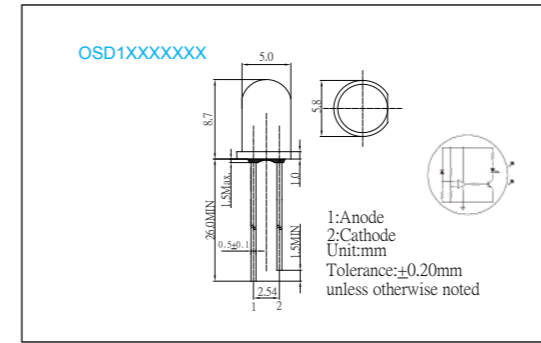
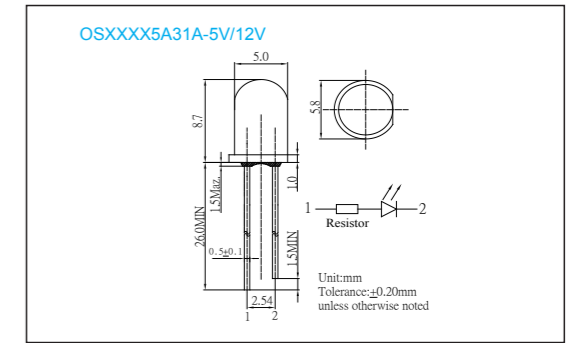
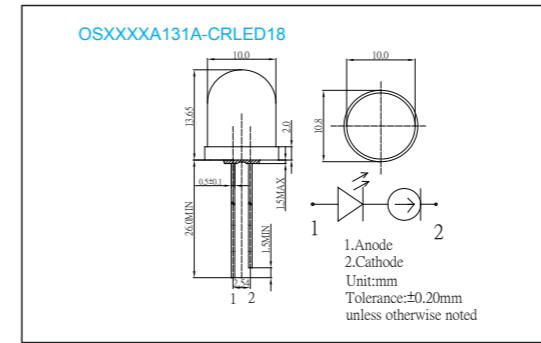
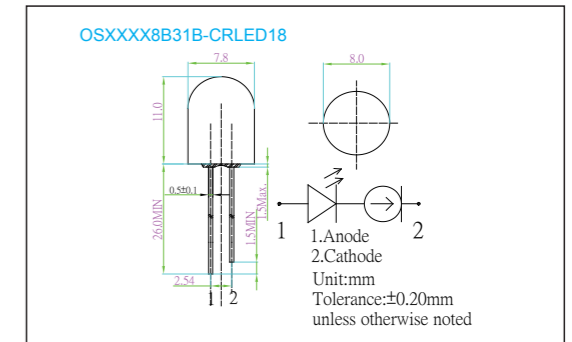
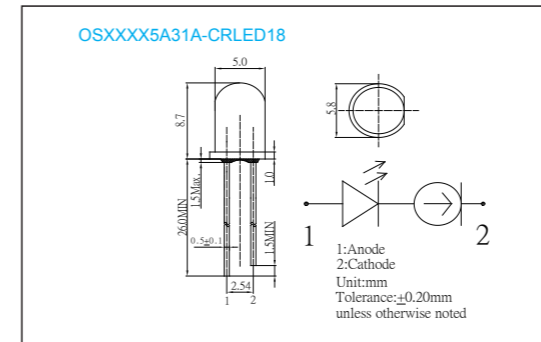
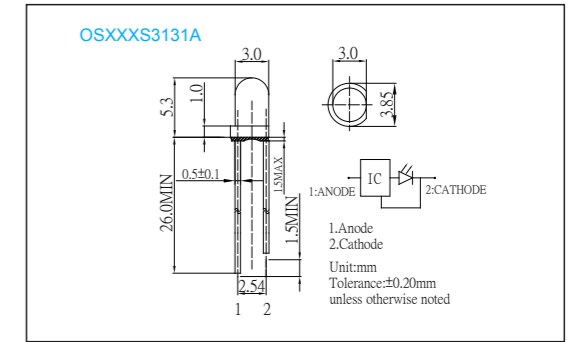
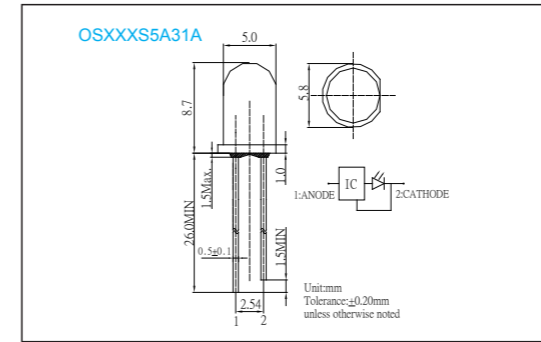
# Outline Dimensions



# Outline Dimensions

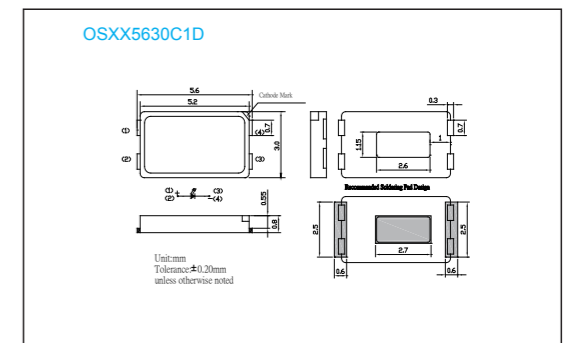
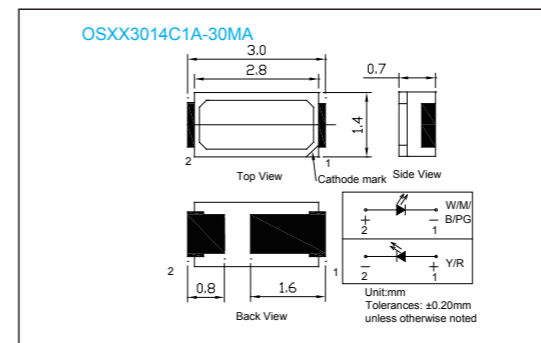
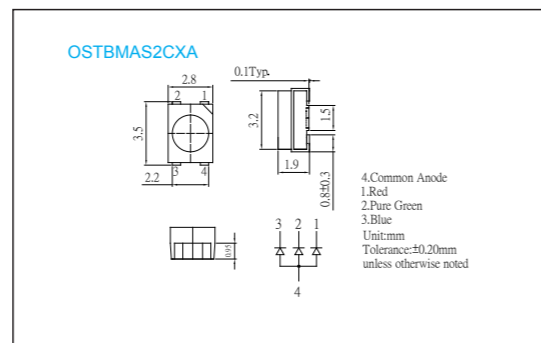
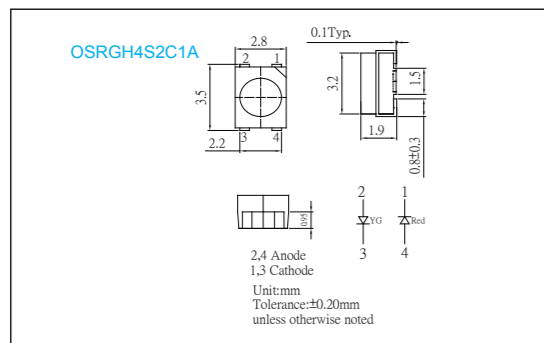
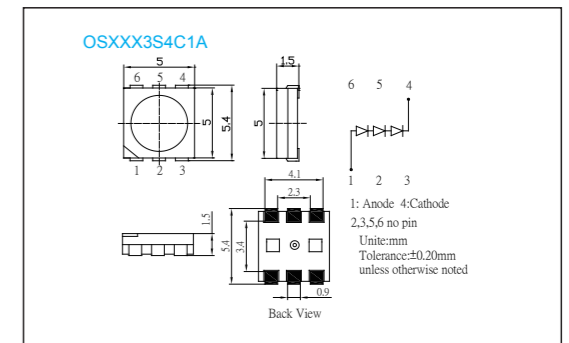
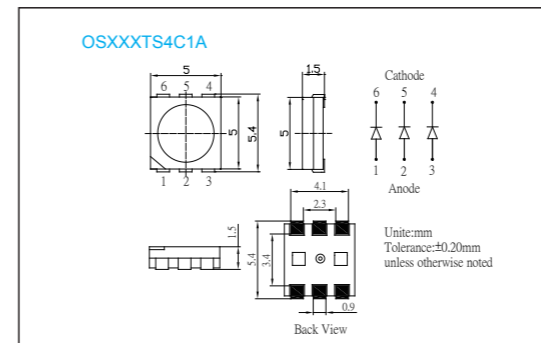
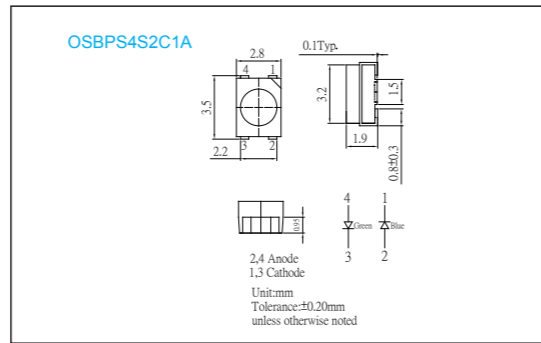
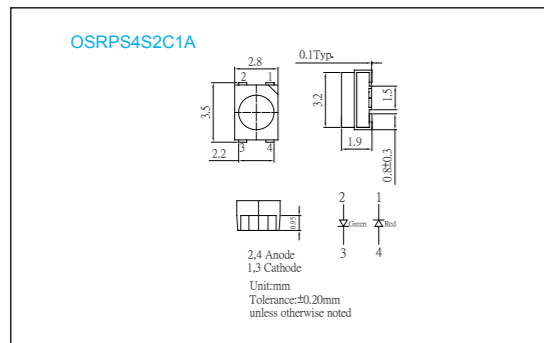
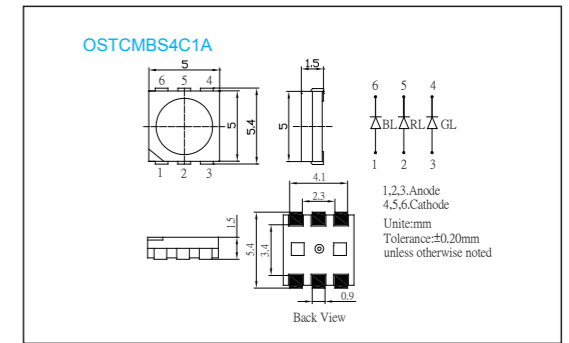
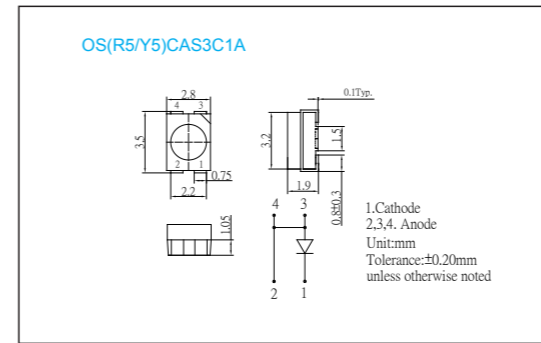
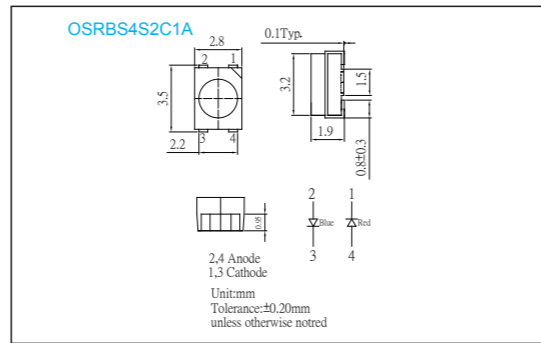
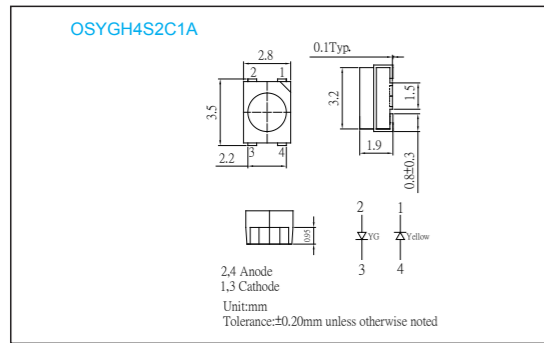
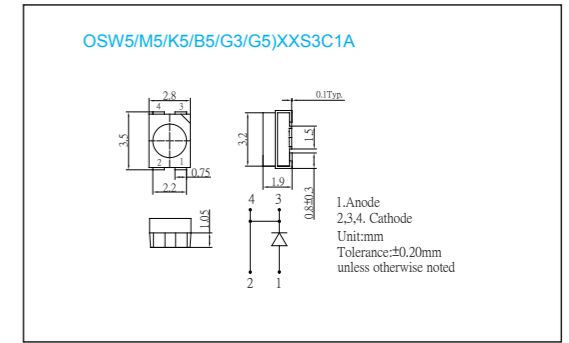
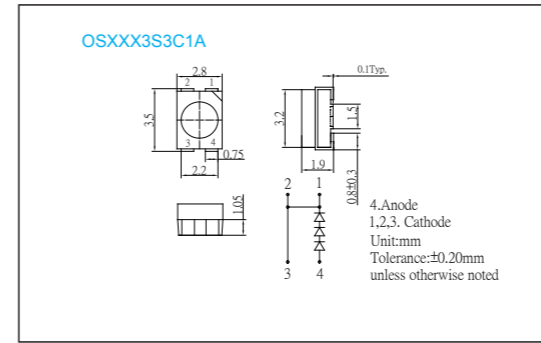
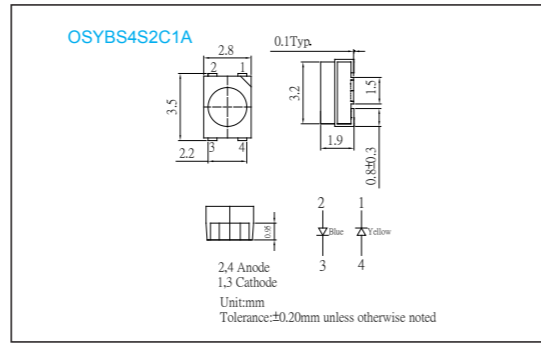
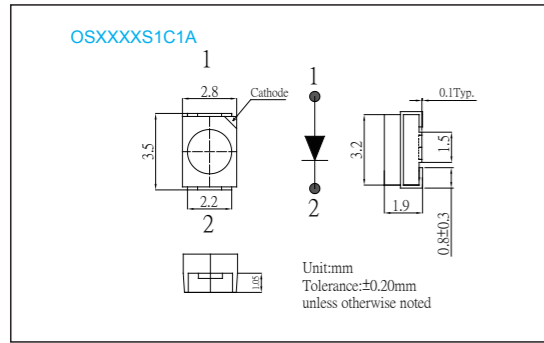


# Outline Dimensions





# Outline Dimensions

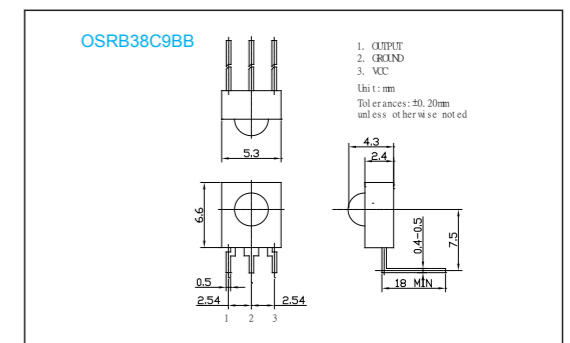
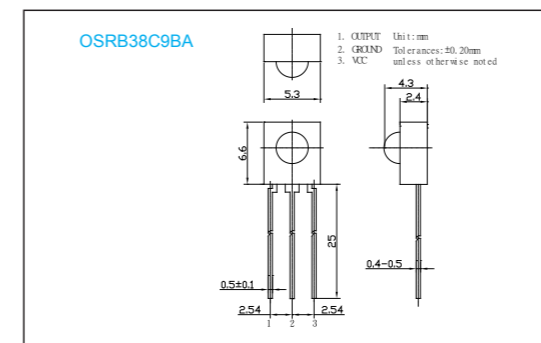
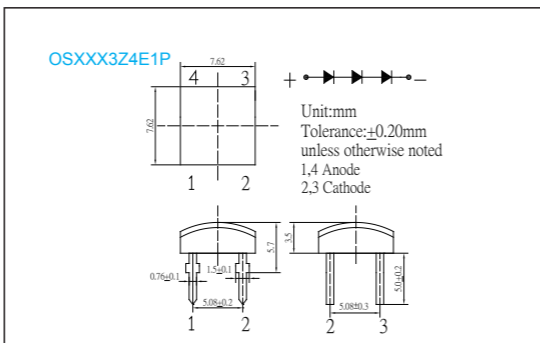
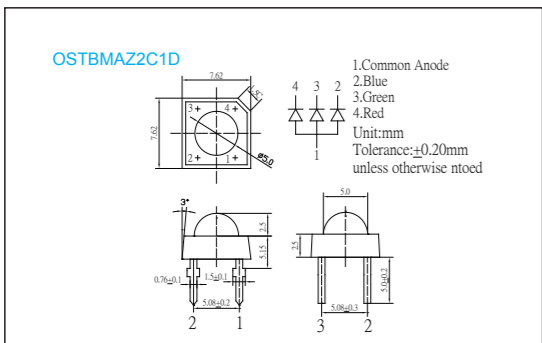
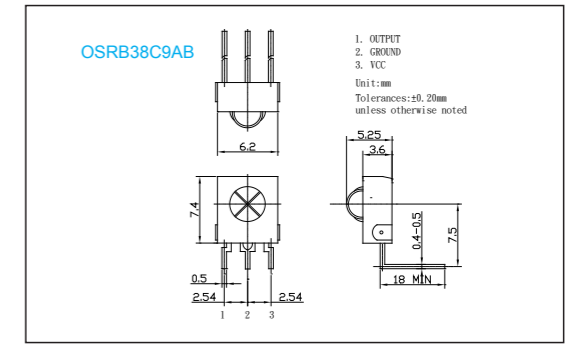
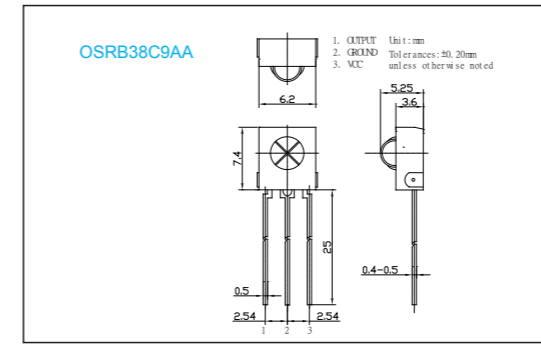
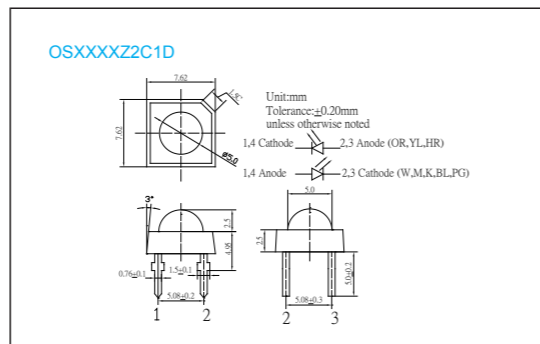
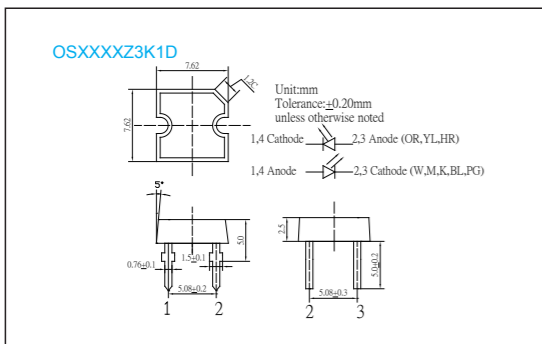
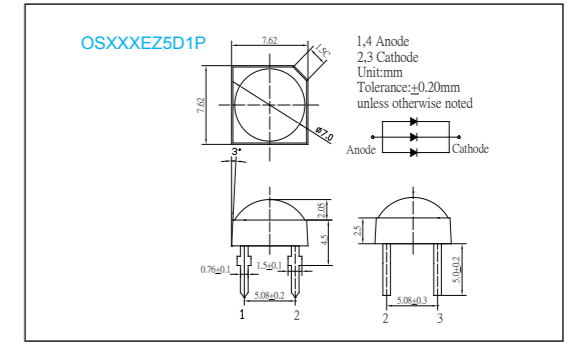
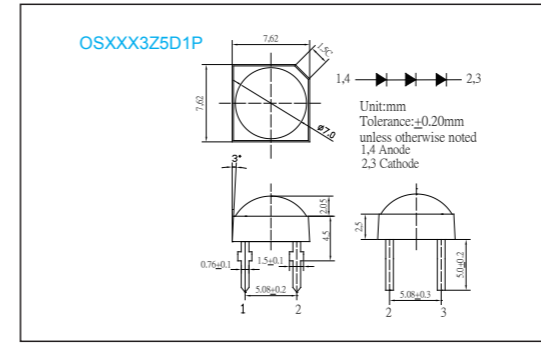
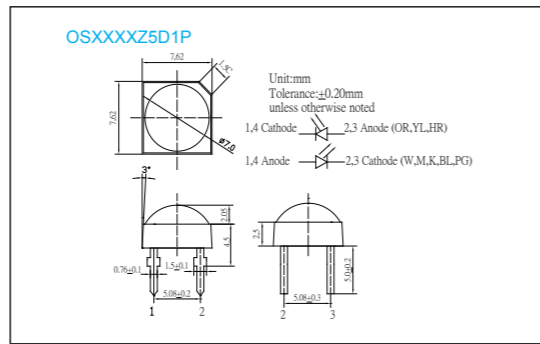
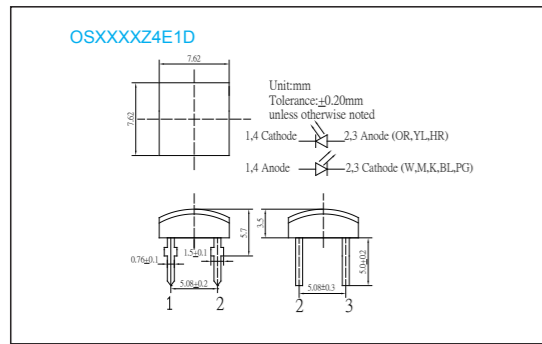
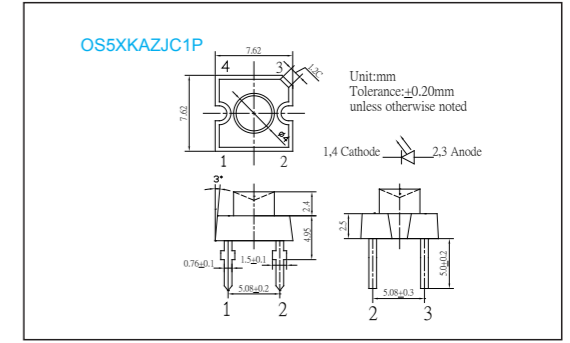
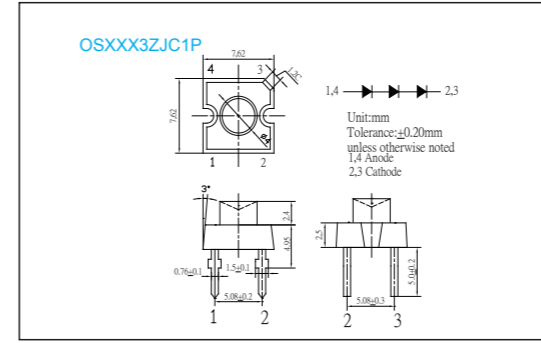
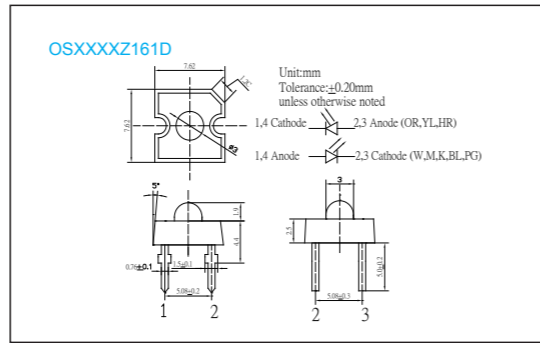
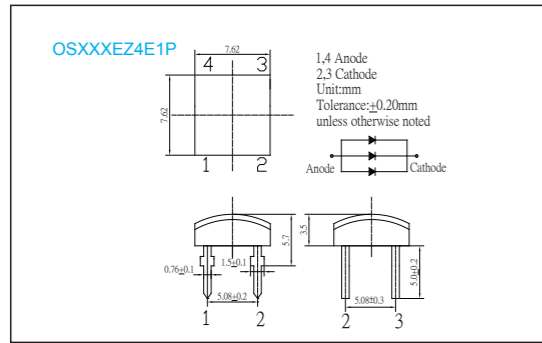


# Outline Dimensions

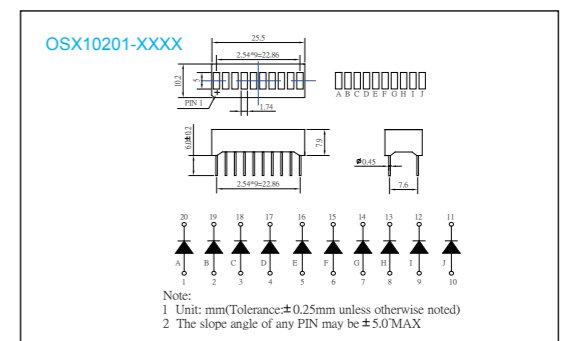
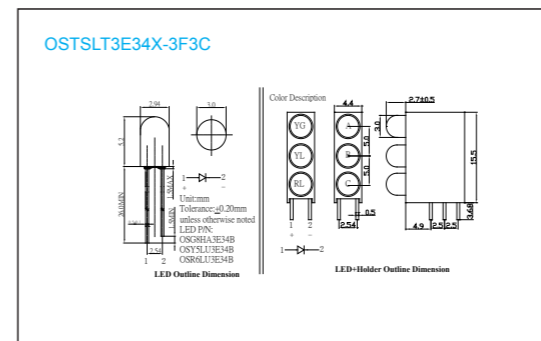
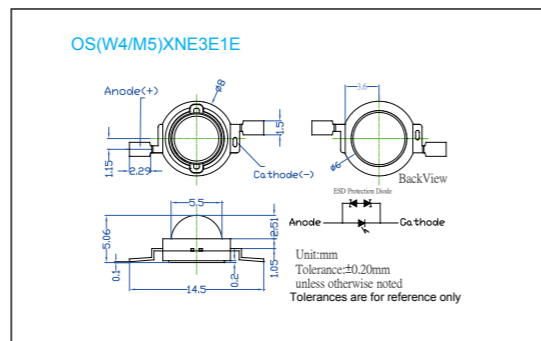
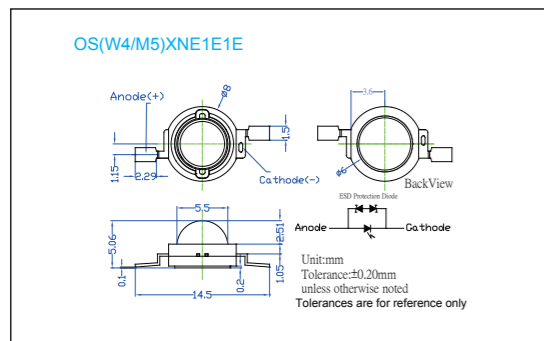
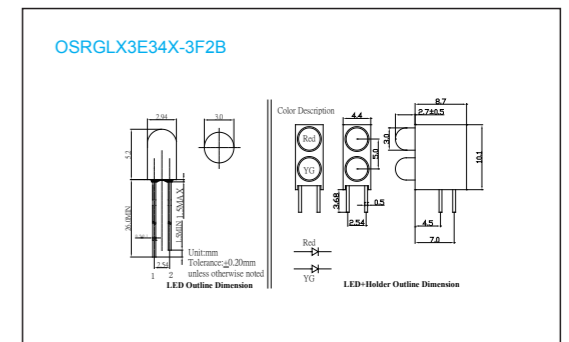
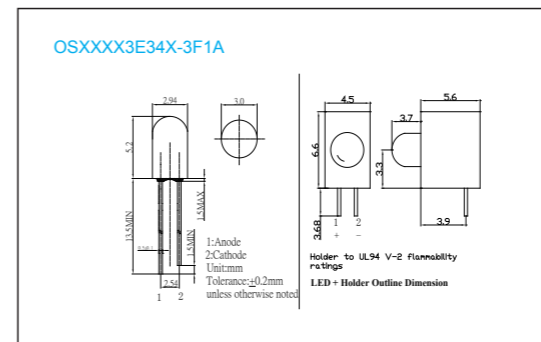
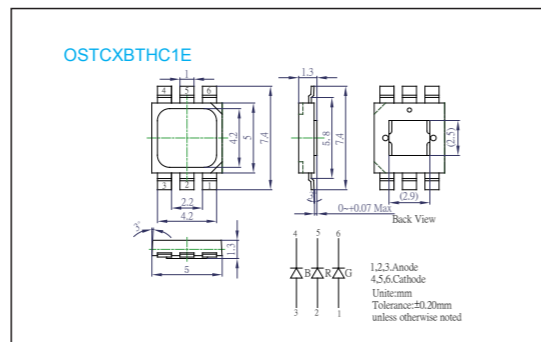
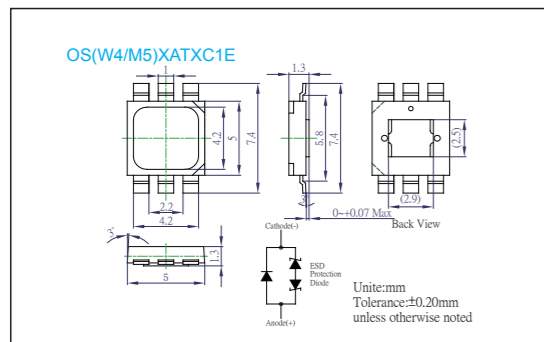
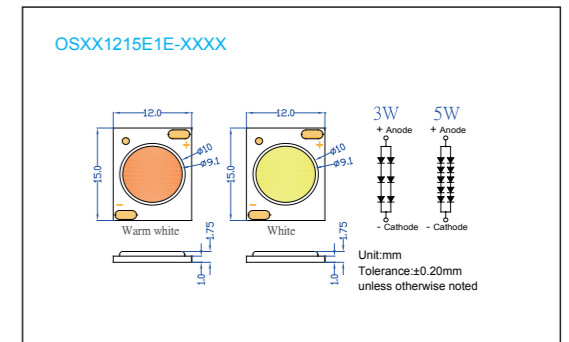
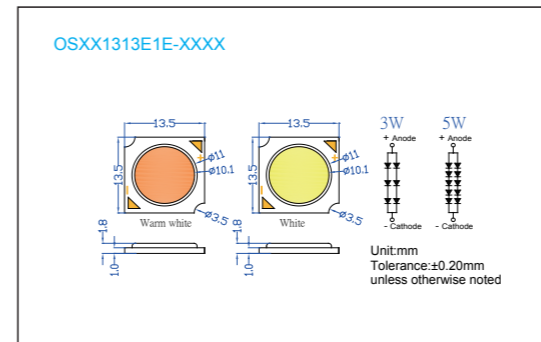
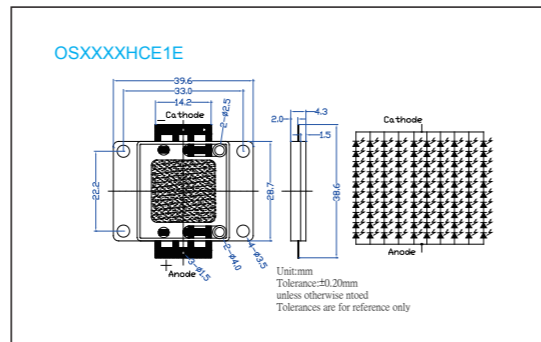
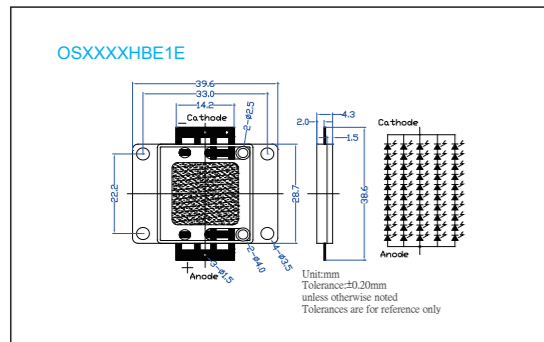
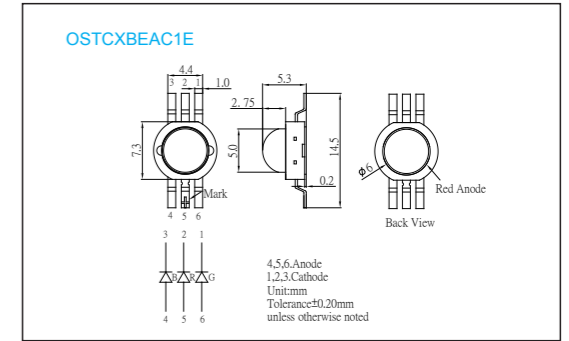
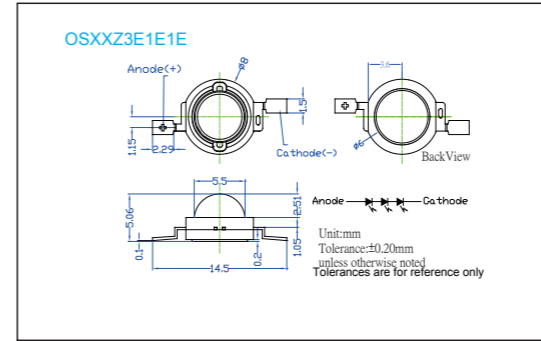
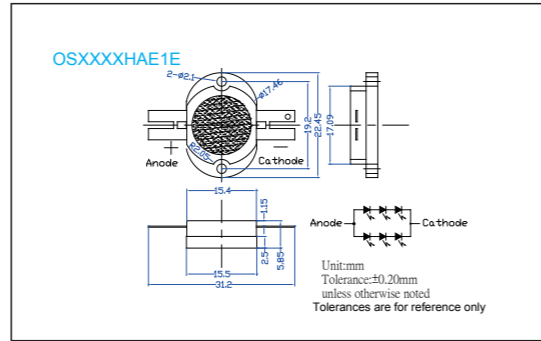
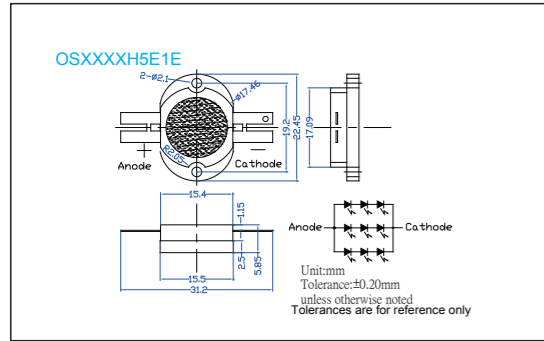


# Outline Dimensions

# Outline Dimensions



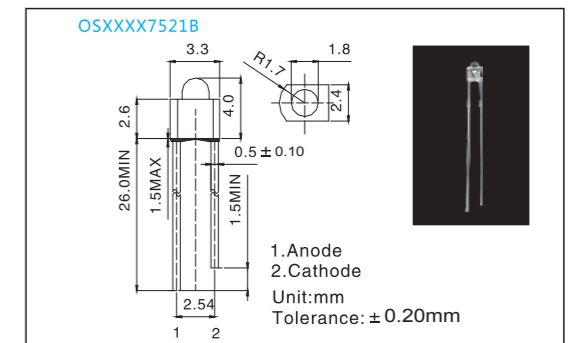
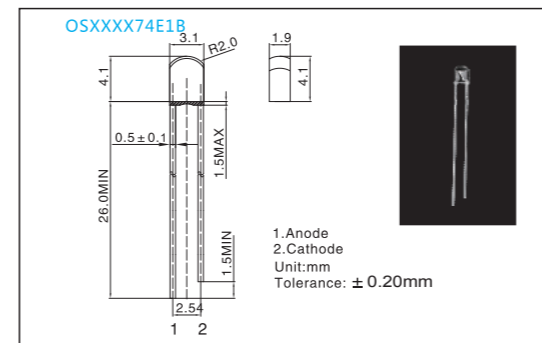
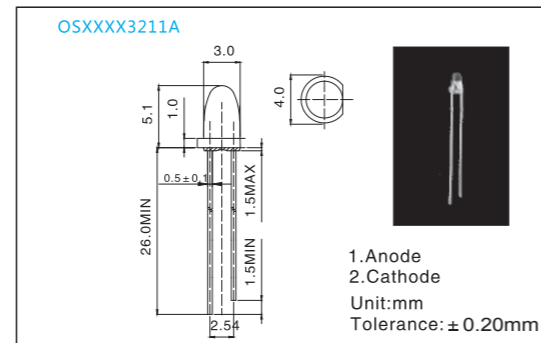
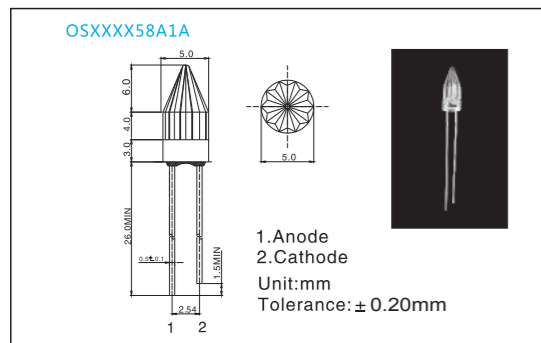
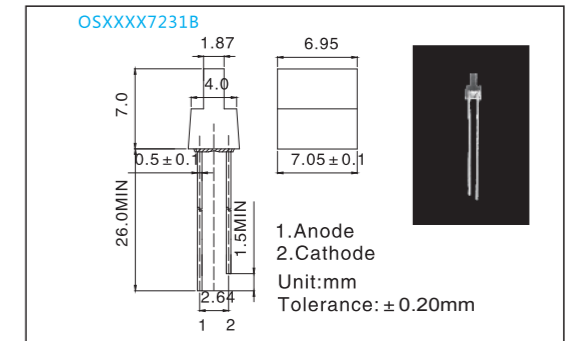
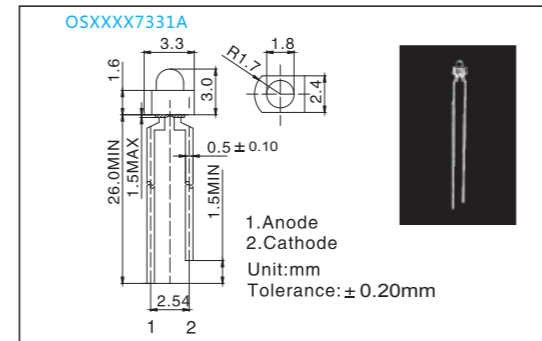
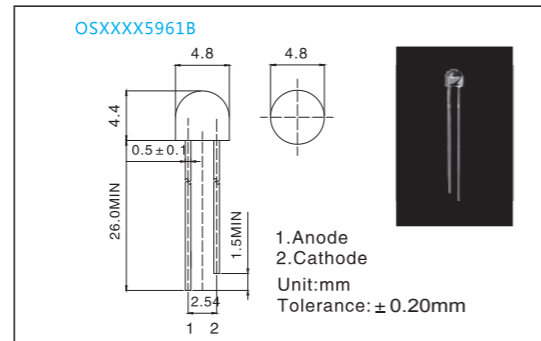
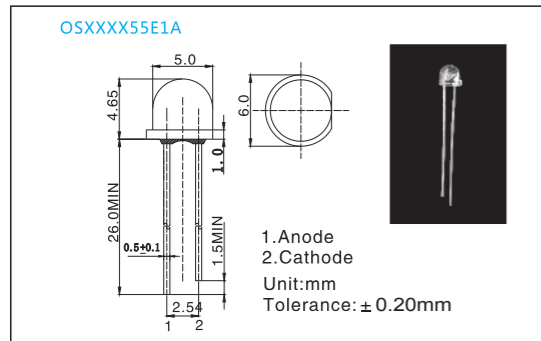
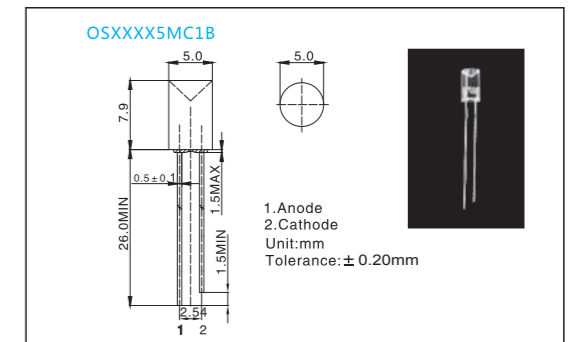
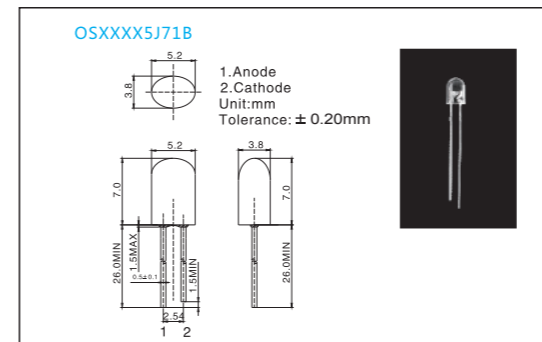
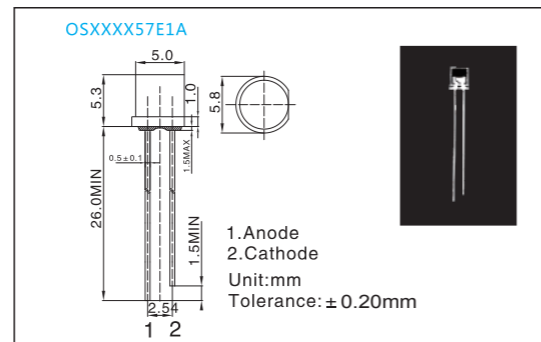
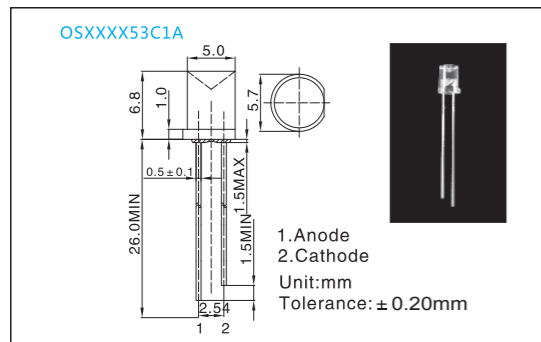
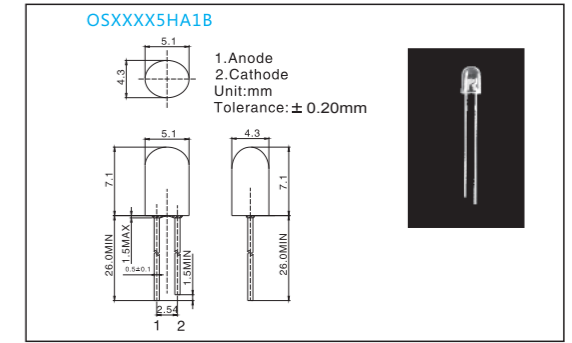
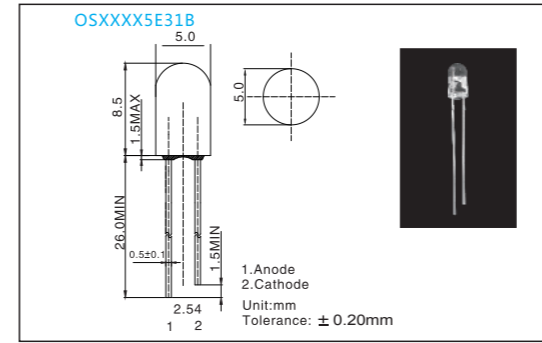
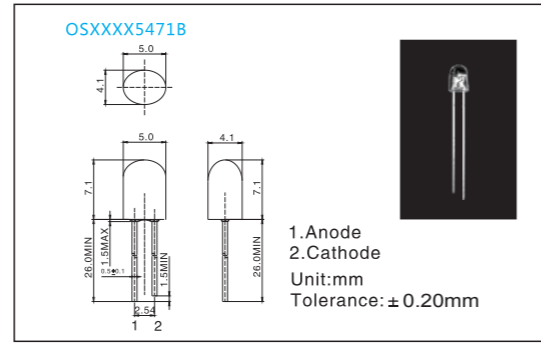
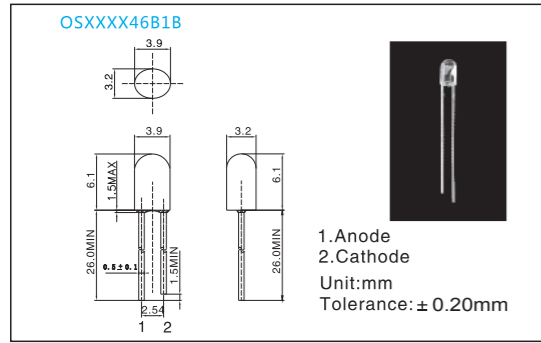
# Outline Dimensions



# Outline Dimensions

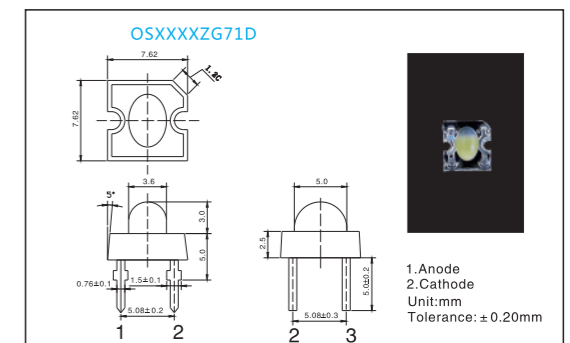
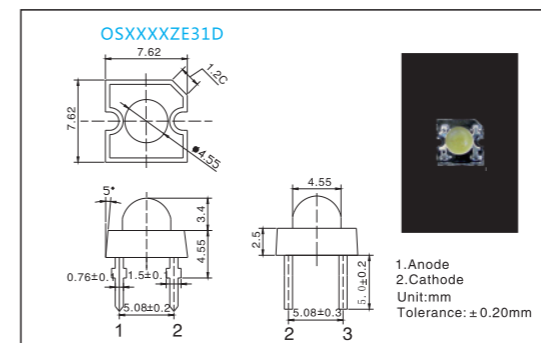
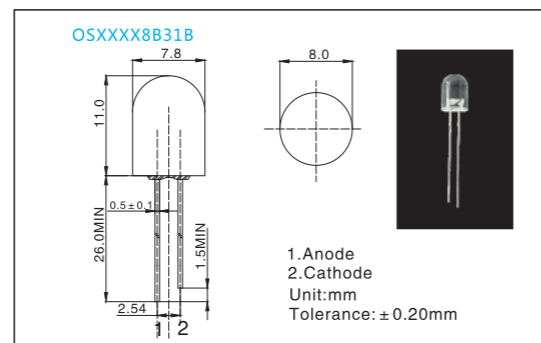
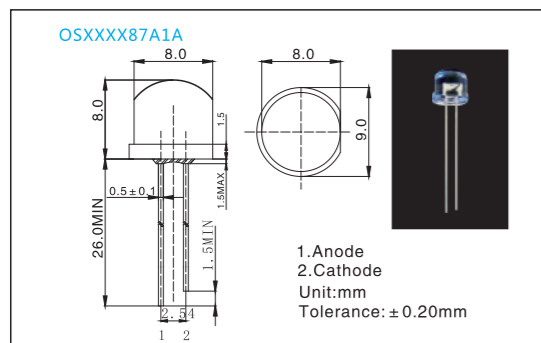
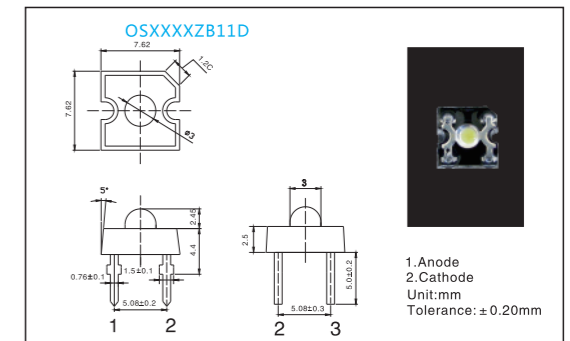
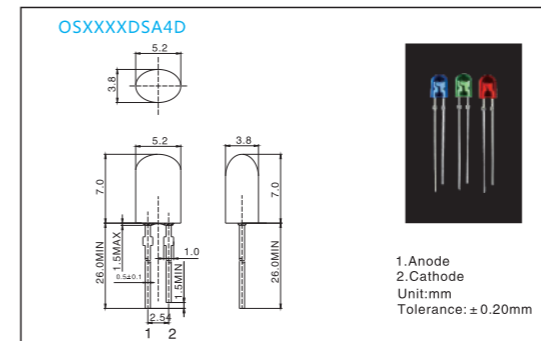
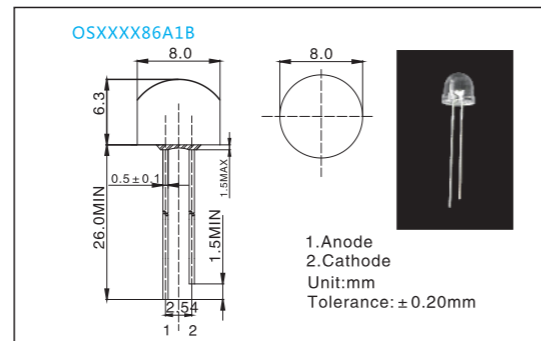
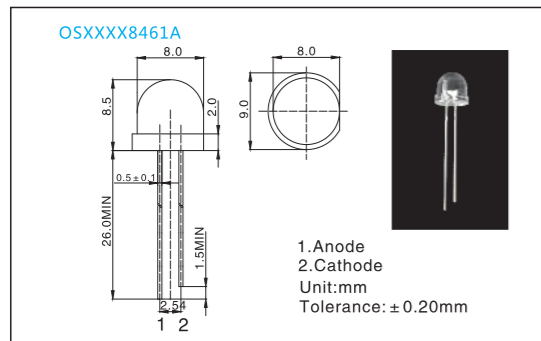
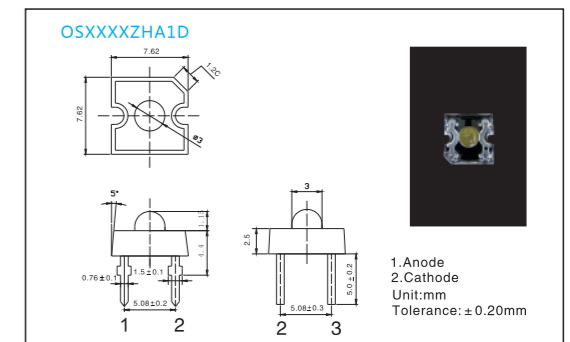
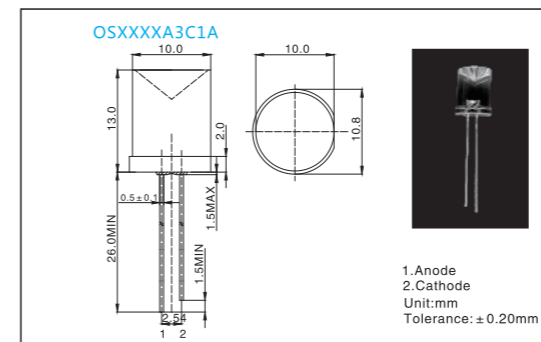
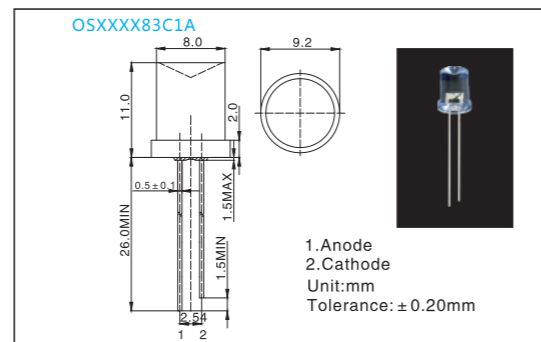
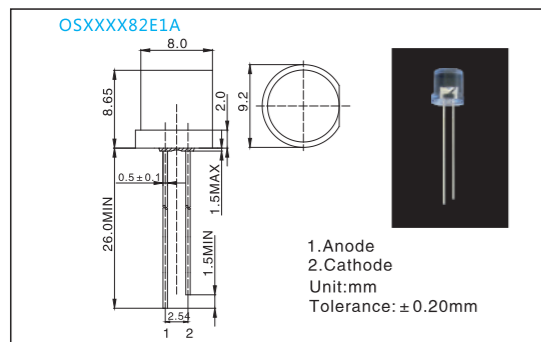
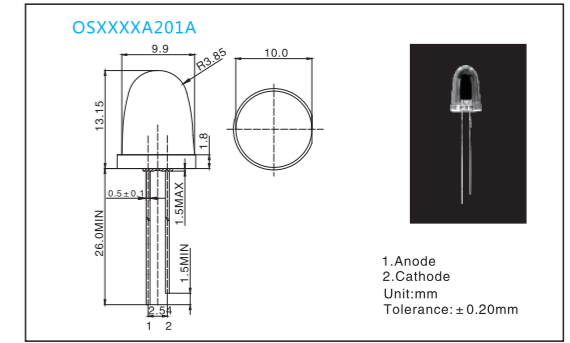
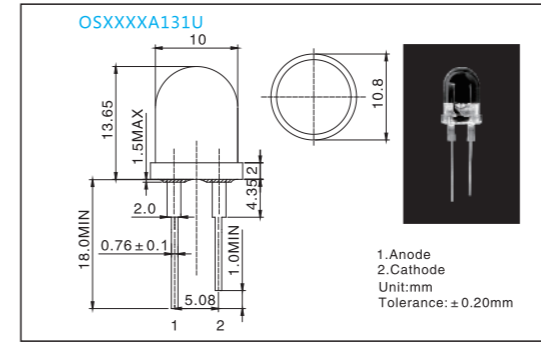
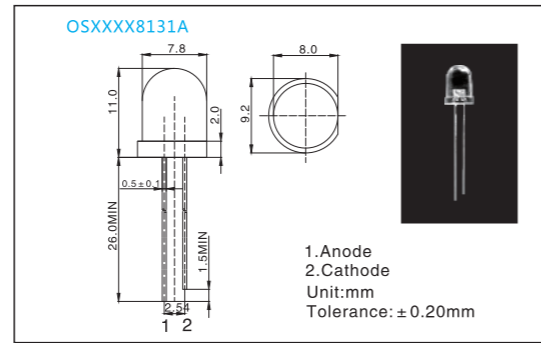
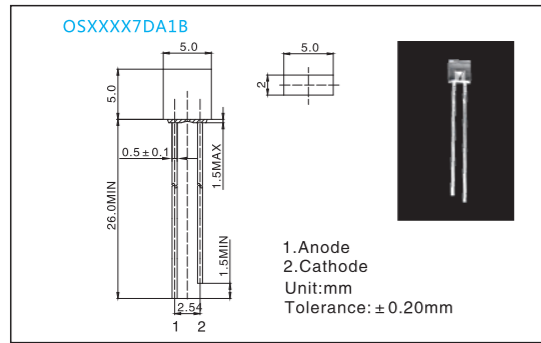


# Outline Dimensions

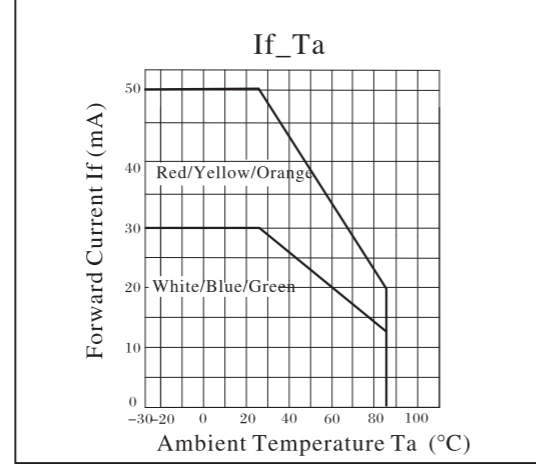
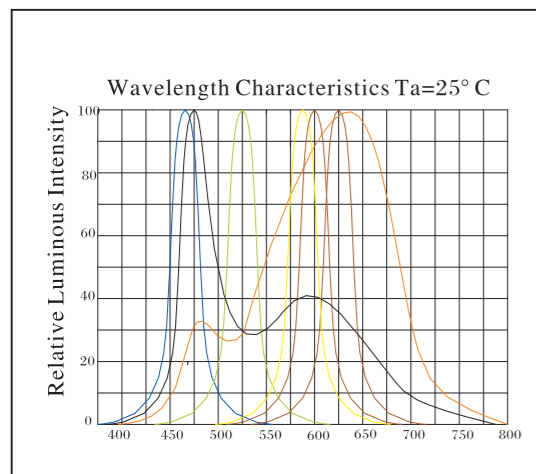
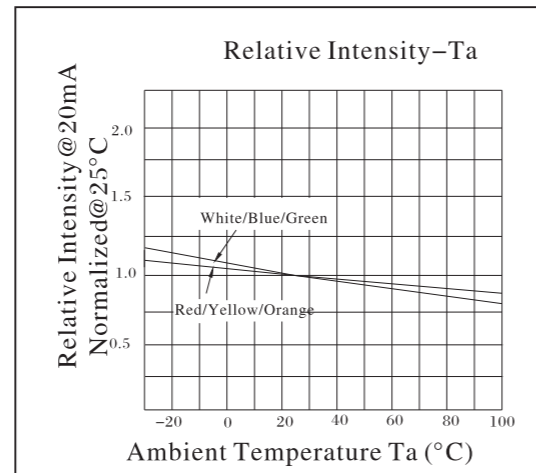
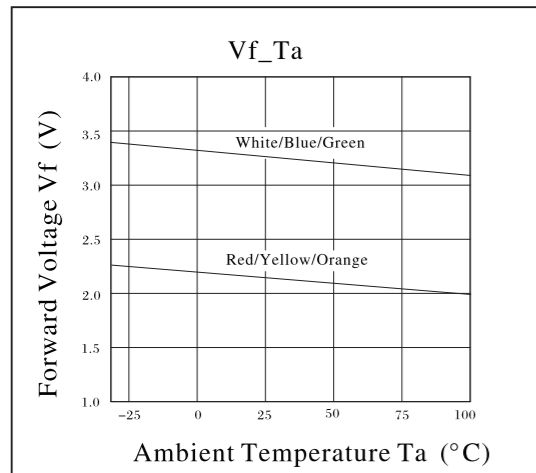
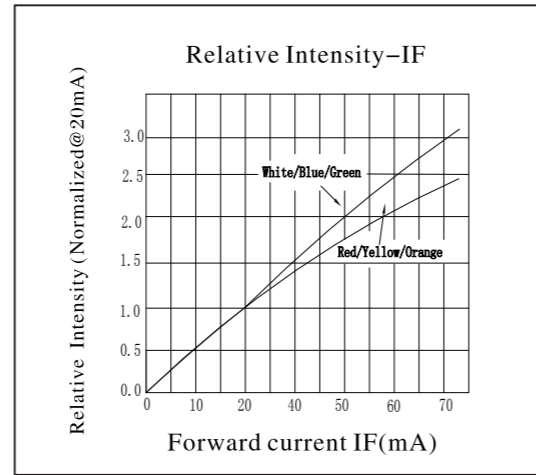
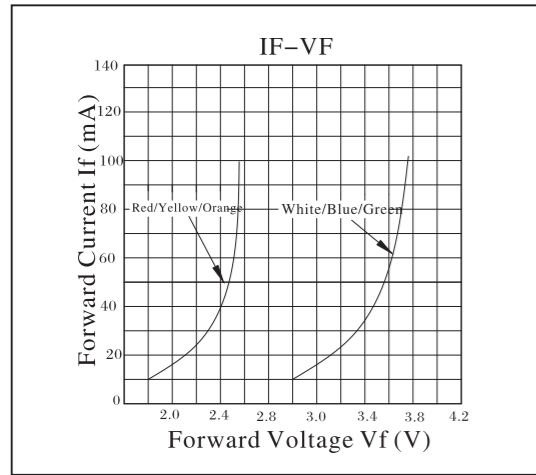


# Outline Dimensions

# Outline Dimensions

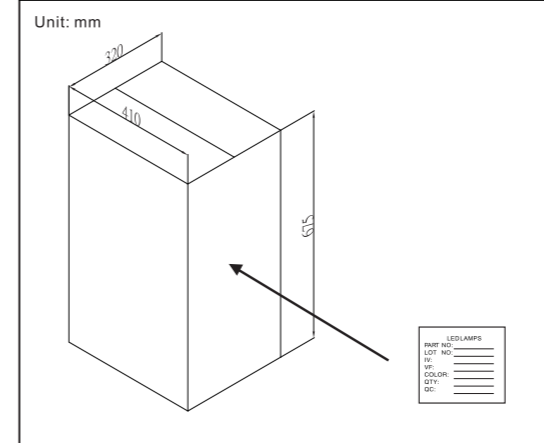
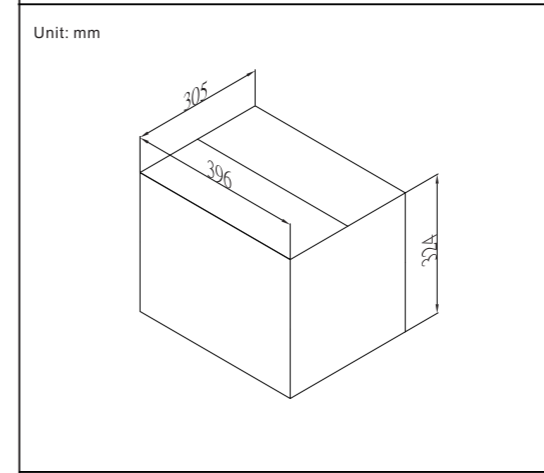
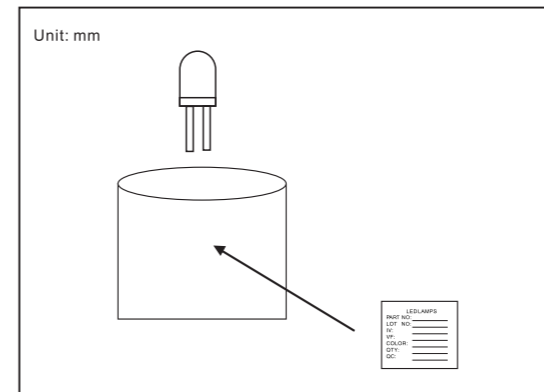


# Outline Dimensions



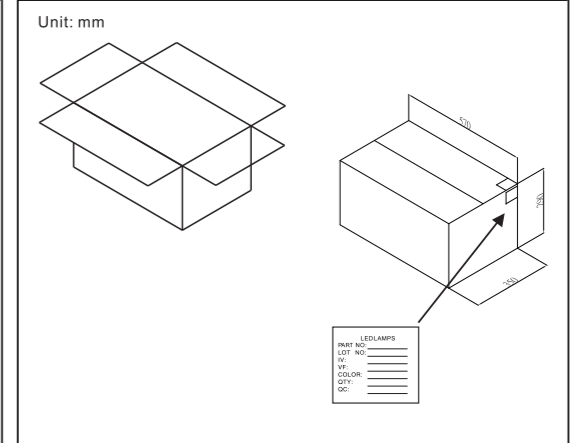
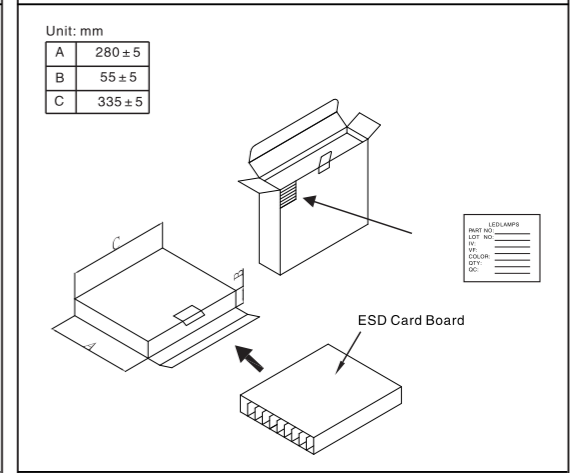
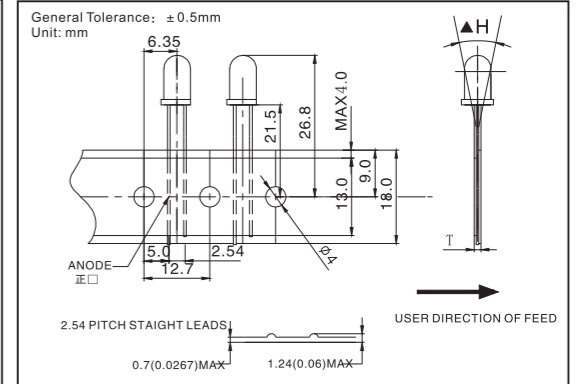
● Packing

\*Bulk Packing



Remark: 1.5mm,ESD Bag(500 pcs/Bag)  
2.5mm, Box(40 Bags/Box)  
3.2 Boxes/Carton

\* Taping Box



Remark: 1.3mm,Box(3000 pcs/box)  
2.5mm, Box(2000 pcs/box)  
3.10 Boxes/carton

## Handling Precautions

### ■ Lead Forming

- When forming leads, the leads should be bent at a point at least 3mm from the base of the epoxy bulb. Do not use the base of the leadframe as a fulcrum during lead forming.
- Lead forming should be done before soldering.
- Do not apply any bending stress to the base of the lead. The stress to the base may damage the LEDs. characteristics or it may break the LEDs.
- When mounting the LEDs onto a printed circuit board, the holes on the circuit board should be exactly aligned with the leads of the LEDs. If the LEDs are mounted with stress at the leads, it causes deterioration of the epoxy resin and this will degrade the LEDs.

### ■ Storage

- The LEDs should be stored at 30°C or less and 70%RH or less after being shipped from Optosupply and the storage life limits are 3 months. If the LEDs are stored for 3 months or more, they can be stored for a year in a sealed container with a nitrogen atmosphere and moisture absorbent material.
- Optosupply's LEDs leadframes are silver plated Fe or Copper alloy. The silver surface may be affected by environments which contain corrosive substances. Please avoid conditions which may cause LEDs to corrode, tarnish or discolor. This corrosion or discoloration may cause difficulty during soldering operations. It is recommended that the LEDs be used as soon as possible.
- Please avoid rapid transitions in ambient temperature, especially, in high humidity environments where condensation can occur.

### ■ Static Electricity

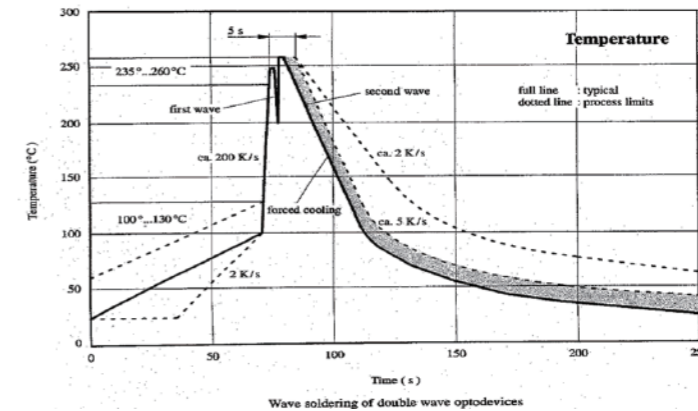
- Static electricity or surge voltage damages the LEDs  
It is recommended that a wrist band or an anti-electrostatic glove be used when handling the Through Hole LEDs.
- All devices, equipment and machinery must be properly grounded. It is recommended that precautions be taken against surge voltage to the equipment that mounts the LEDs
- When inspecting the final products in which LEDs were assembled, it is recommended to check whether the assembled LEDs are damaged by static electricity or not. It is easy to find static-damaged LEDs by a light-on test or a VF test at a lower current (below 1mA is recommended).
- Damaged the LEDs will show some unusual characteristics such as the leak current remarkably increases, the forward voltage becomes lower, or the LEDs do not light at the low current.  
Criteria: (VF >2.0V at IF=0.5mA)

## ● Soldering Conditions

### ■ Recommended Soldering Conditions

Wave Soldering		Hand Soldering	
Pre-Heat	120 °C Max.	Temperature	350°C Max.
Pre-Heat Time	60 seconds Max.	Soldering Time	3 seconds Max.
Solder Bath Temperature	260 °C Max.	Position	No closer than 3 mm from the base of the epoxy bulb.
Dipping Time	5 seconds Max.		
Dipping Position	No lower than 3mm from the base of the epoxy bulb.		

\*Solder the LED No Closer than 3mm from the base of the epoxy bulb. Soldering beyond the base of the tie bar is recommended.



- All Lamp Type LED products are pb-free soldering available.
- Optosupply's LEDs leadframes are silver plated Fe or Copper alloy. Careful attention should be paid during soldering.
- Although the recommended soldering conditions are specified in the above table, dip or hand soldering at the lowest possible temperature is desirable for the LEDs.
- A rapid-rate process is not recommended for cooling the LEDs down from the peak temperature.
- Dip soldering should not be done more than one time.
- Hand soldering should not be done more than one time.
- Do not apply any stress to the lead particularly when heated.
- The LEDs must not be repositioned after soldering.
- After soldering the LEDs, the epoxy bulb should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- Direct soldering onto a PC board should be avoided. Mechanical stress to the resin may be caused from



## Lamp Type Precautions In Use

warping of the PC board or from the clinching and cutting of the leadframes. When it is absolutely necessary, the LEDs may be mounted in this fashion but the User will assume responsibility for any problems. Direct soldering should only be done after testing has confirmed that no damage, such as wire bond failure or resin deterioration, will occur. resin deterioration, will occur. Optosupply's LEDs should not be soldered directly to double sided PC boards because the heat will deteriorate the epoxy resin.

- When it is necessary to clamp the LEDs to prevent soldering failure, it is important to minimize the mechanical stress on the LEDs.
- Cut the LEDs leadframes at room temperature. Cutting the leadframes at high temperatures may cause failure of the LEDs.

### ■ Heat Generation

• Thermal design of the end product is of paramount importance. Please consider the heat generation of the LEDs when making the system design. The coefficient of temperature increase per input electric power is affected by the thermal resistance of the circuit board and density of LEDs placement on the board, as well as other components. It is necessary to avoid intense heat generation and operating current should be decided after considering the ambient maximum temperature of LEDs.

### ■ Cleaning

• It is recommended that isopropyl alcohol be used as a solvent for cleaning LEDs. When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the resin or not. Freon solvents should not be used to clean the LEDs because of worldwide regulations.

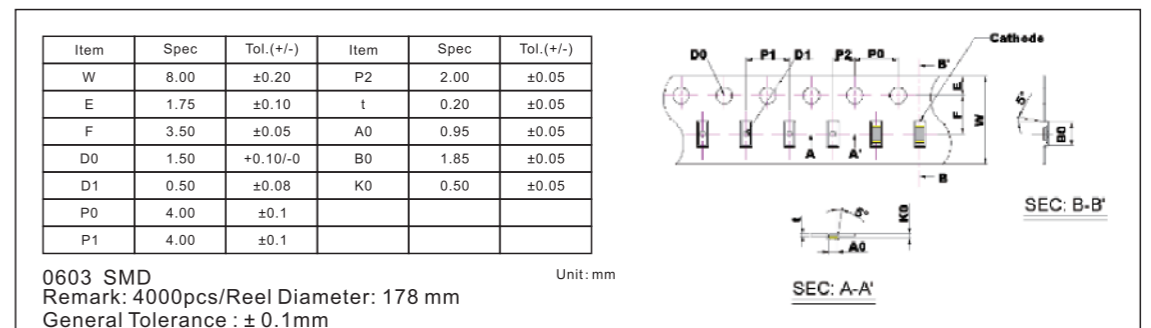
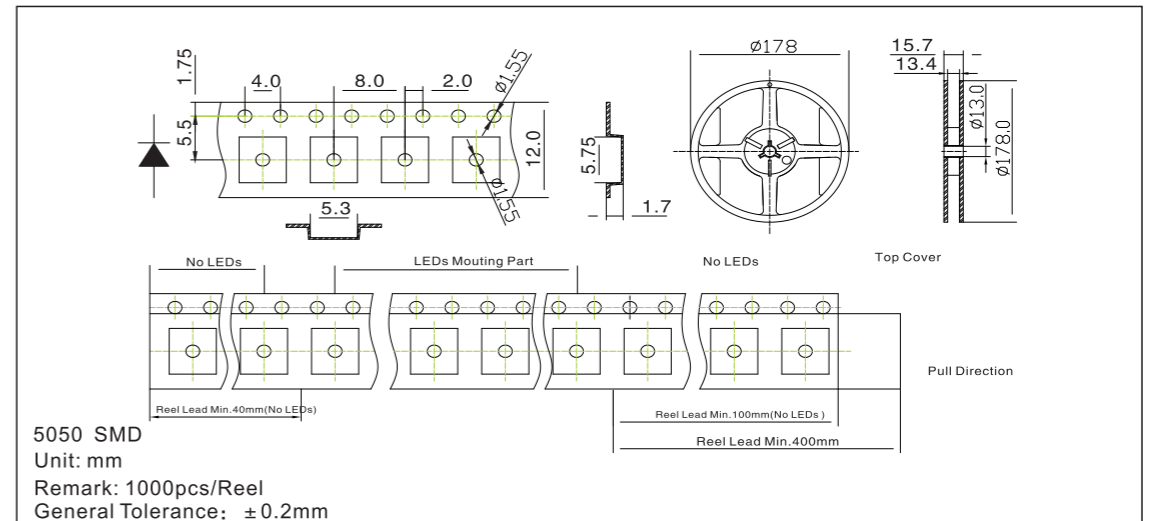
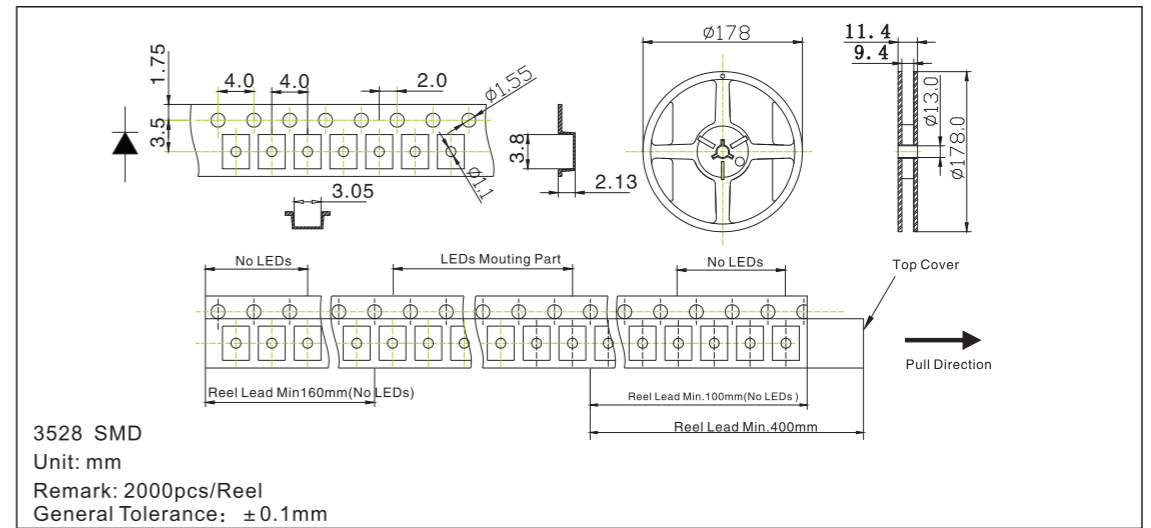
• Do not clean the LEDs by the ultrasonic. When it is absolutely necessary, the influence of ultrasonic cleaning on the LEDs depends on factors such as ultrasonic power and the assembled condition. Before cleaning, a pre-test should be done to confirm whether any damage to LEDs will occur.

### ■ Others

- The LED complies with RoHS and REACH Directive.
- The LED light output is strong enough to injure human eyes. Precautions must be taken to prevent looking directly at the LEDs with unaided eyes for more than a few seconds.
- Flashing lights have been known to cause discomfort in people; you can prevent this by taking precautions during use. Also, people should be cautious when using equipment that has had LEDs incorporated into it.
- The LEDs described in this brochure are intended to be used for ordinary electronic equipment (such as office equipment, communications equipment, measurement instruments and household appliances). Consult Optosupply's sales staff in advance for information on the applications in which exceptional quality and reliability are required, particularly when the failure or malfunction of the LEDs may directly jeopardize life or health (such as for airplanes, aerospace, submersible repeaters, nuclear reactor control systems, automobiles, traffic control equipment, life support systems and safety devices).
- User shall not reverse engineer by disassembling or analysis of the LEDs without having prior written consent from Optosupply. Optosupply directly before disassembling or analysis.
- The formal specifications must be exchanged and signed by both parties before large volume purchase begins.
- The appearance and specifications of the product may be modified for improvement without notice.

## Surface Mount Type Packing

### ● Surface Mount Type Packing



## Handling Precautions

### ■ Moisture Proof Package

• When moisture is absorbed into the SMT package it may vaporize and expand during soldering. There is a possibility that this can cause exfoliation of the contacts and damage to the optical characteristics of the LEDs. For this reason, the moisture proof package is used to keep moisture to a minimum in the package.

• The moisture proof package is made of an aluminum moisture proof bag. A package of a moisture absorbent material (silica gel) is inserted into the aluminum moisture proof bag. The silica gel changes its color from blue to pink as it absorbs moisture.

### ■ Storage

• Storage Conditions

Before opening the package :

The LEDs should be kept at 30°C or less and 60%RH or less. The LEDs should be used within a year. When storing the LEDs, moisture proof packaging with absorbent material (silica gel) is recommended.

• After opening the package :

Soldering should be done right after opening the package (within 24hrs).

Keeping of a fraction, sealing and Temperature : 5~30°C Humidity : Less than 30%. If the package has been opened more than 24 Hours, components should be dried for 12hrs, at 60±5°C.

• Optosupply LED electrode sections are comprised of a silver plated copper alloy. The silver surface may be affected by environments which contain corrosive gases and so on. Please avoid conditions which may cause the LED to corrode, tarnish or discolor. This corrosion or discoloration may cause difficulty during soldering operations. It is recommended that the User use the LEDs as soon as possible.

• Please avoid rapid transitions in ambient temperature, especially in high humidity environments where condensation can occur.

### ■ Static Electricity

• Static electricity or surge voltage damages the LEDs.

It is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.

• All devices, equipment and machinery must be properly grounded.

It is recommended that measures be taken against surge voltage to the equipment that mounts the LEDs.

### ■ Static Electricity

• Static electricity or surge voltage damages the LEDs.

It is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.

tatic Electricity

• All devices, equipment and machinery must be properly grounded.

It is recommended that measures be taken against surge voltage to the equipment that mounts the LEDs.

## ● Soldering Conditions

### ■ Recommended Soldering Conditions

Reflow Soldering		Hand Soldering	
Pre-Heat	180~200°C	Temperature Soldering time	350°C Max. 3 sec. Max. (one time only)
Pre-Heat Time	120 sec. Max.		
Peak temperature	260°C Max.		
Dipping Time	10sec. Max.		
Condition	Refer to Temperature-profile ①		

\*Recommended soldering conditions vary according to the type of LED

\*Although the recommended soldering conditions are specified in the above table, reflow, or hand soldering at the lowest possible temperature is desirable for the LEDs.

\*A rapid-rate process is not recommended for cooling the LEDs down from the peak temperature.

• All SMD LED products are pb-free soldering available.

• Occasionally there is a brightness decrease caused by the influence of heat or ambient atmosphere during air reflow. It is recommended that the User use the nitrogen reflow method.

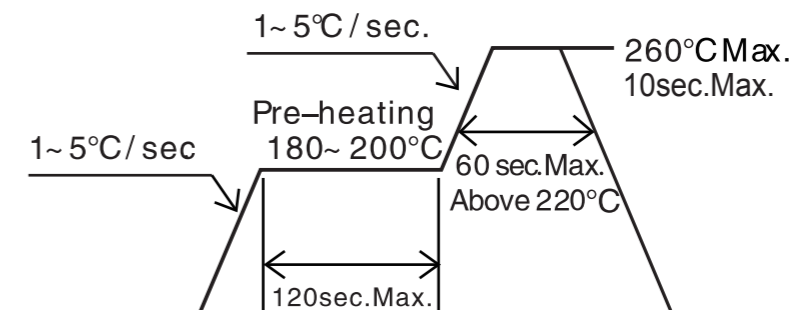
• Repairing should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used. It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.

• Reflow soldering should not be done more than two times.

• When soldering, do not put stress on the LEDs during heating.

• After soldering, do not warp the circuit board.

### Temperature-Profile (Surface of Circuit Board)



## Heat Generation

- Thermal design of the end product is of paramount importance. Please consider the heat generation of the LEDs when making the system design. The coefficient of temperature increase per input electric power is affected by the thermal resistance of the circuit board and density of LEDs placement on the board, as well as other components. It is necessary to avoid intense heat generation and operating current should be decided after considering the ambient maximum temperature of LEDs.

## Cleaning

- It is recommended that isopropyl alcohol be used as a solvent for cleaning LEDs. When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the resin or not. Freon solvents should not be used to clean the LEDs because of worldwide regulations.

- Do not clean the LEDs by the ultrasonic. When it is absolutely necessary, the influence of ultrasonic cleaning on the LEDs depends on factors such as ultrasonic power and the assembled condition.

Before cleaning, a pre-test should be done to confirm whether any damage to LEDs will occur.

- it is recommended to use isopropyl alcohol as a solvent for cleaning on certain LEDs. For more information about proper cleaning methods of each LED, please refer its respective specification sheet.

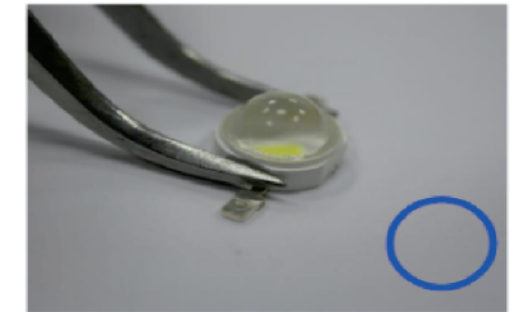
## Others

- The LED complies with RoHS and REACH Directive.
- The LED light output is strong enough to injure human eyes. Precautions must be taken to prevent looking directly at the LEDs with unaided eyes for more than a few seconds.
- Flashing lights have been known to cause discomfort in people; you can prevent this by taking precautions during use. Also, people should be cautious when using equipment that has had LEDs incorporated into it.
- The LEDs described in this brochure are intended to be used for ordinary electronic equipment (such as office equipment, communications equipment, measurement instruments and household appliances). Consult Optosupply's sales staff in advance for information on the applications in which exceptional quality and reliability are required, particularly when the failure or malfunction of the LEDs may directly jeopardize life or health (such as for airplanes, aerospace, submersible repeaters, nuclear reactor control systems, automobiles, traffic control equipment, life support systems and safety devices).
- User shall not reverse engineer by disassembling or analysis of the LEDs without having prior written consent from Optosupply. Optosupply directly before disassembling or analysis.
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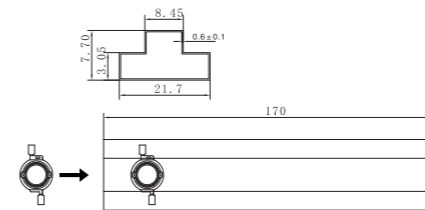
## Handling of Silicone Lens LEDs

Notes for handling of silicone lens LEDs

- Please do not use a force of over 3kgf impact or pressure on the silicone lens, otherwise it will cause a catastrophic failure.
- The LEDs should only be picked up by making contact with the sides of the LED body.
- Avoid touching the silicone lens especially by sharp tools such as Tweezers.
- Avoid leaving fingerprints on the silicone lens.
- Please store the LEDs away from dusty areas or seal the product against dust.
- When populating boards in SMT production, there are basically no restrictions regarding the form of the pick and place nozzle, except that mechanical pressure on the silicone lens must be prevented.
- Please do not mold over the silicone lens with another resin. (epoxy, urethane, etc)



## Xeon Power LED Packing: Plastic Tube



## Handling of Ceramic LED

