

Product Data

Proeon Series

Main Applications

Entertainment lighting: Stage lights
 Architectural lighting: Wall washer
 Spotlights

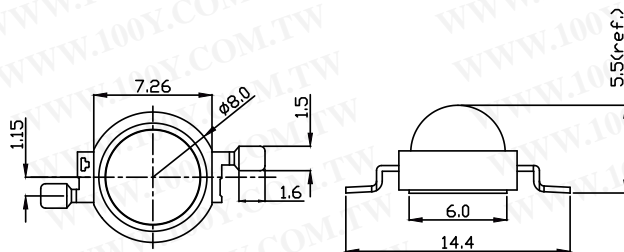
Features

Compatible with IR reflow soldering processes
 Super wide viewing angle: 130°
 Moisture sensitivity level: JEDEC 2a
 Superior ESD protection

Photometric Luminous Flux Bin Structure

Bin	Min. Lumens	Max. Lumens
T1	67.2	76.6
T2	76.6	87.4
U1	87.4	100
U2	100	110
V1	110	120
V2	120	130
W1	130	140
W2	140	155

*for White and Warm White



Proeon-PM2B/PM2L Collimator

Collimator P/N	PG1C-NX17	PG1C-NX36	PG1N-NX43	PG1C-NX43	PG1N-NX45	PM2B-NX25-AW	PM2B-NX35-AW	PM2B-NX45-AW	PM2B-NX55-AW	PM6A-FN20	PM6A-FN25
Holder P/N	PG1C-SX17	PG1N-SO02	PG1N-SO02	PG1C-SX43	PG1N-SO02						
Picture											
Diameter (mm)	20	20	20	20	20	20	20	20	20	35	35
Angle	20°	35°	45°	55°	60°	25°	35°	45°	55°	25°	35°

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

Product Data

Proeon Series

1 Watt Proeon

Part No.	Color	Photometric Luminous Flux Bin	Lumens Flux (Min.)	Test Current	Vf (V)	CCT/λd(nm)	2θ½ [°]
					Typ.		
PM2B-1LWE PM2L-1LWE	White	U1*/U2/V1/V2/W1/W2	87.4*/100/110/120/ 130/140	350mA	3.4	4100~10000K	130°
PM2B-1LVE PM2L-1LVE	Warm White	U1*/U2/V1/V2/W1/W2*	87.4*/100/110/120/ 130/140*		3.4	2700~4100K	
PM2B-1LBE PM2L-1LBE	Blue	M*/N/P	13.9*/18.1/23.5		3.4	455~475nm	
PM2B-1LGE PM2L-1LGE	Green	T1/T2/U1/U2*	67.2/76.6/87.4/99.6*		3.4	515~535nm	
PM2B-1LAE PM2L-1LAE	Amber	R/S1/S2*/T1*	39.8/51.7/58.9*/67.2*		2.2	587~597nm	
PM2B-1LRE PM2L-1LRE	Red	R/S1/S2*	39.8/51.7/58.9*		2.2	613.5~631nm	
PM2B-1LME	Crimson	N/P*	18.1/23.5*		2.2	635~645nm	
PM2B-1LCE	Cyan	S2/T1*/T2*	58.9/67.2*/76.6*		3.4	495~515nm	
PM2B-1LDE	Royal Blue	P/Q/R*	355/435/515* mW		3.4	450~460nm	
PM2B-1LEE	Cherry Red	K/L*	8.2/10.7*		2.2	720~740nm	
PM2L-1LLE-LC	UV	P/Q*	875/1050* mW		3.4	390~410(λp)nm	

PM2B-1LWE CRI 74

*ask for stock

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Product Data

Proeon Series

3 Watt Proeon

Part No.	Color	Photometric Luminous Flux Bin	Lumens Flux (Min.)	Test Current	Vf (V)	CCT/λd(nm)	2θ½ [°]
					Typ.		
PM2B-3LWE-SD PM2L-3LWE-SD	White	W2*/X1/X2/Y1*	168.4*/192/218.9/249.6*	700mA	3.6	4100~10000K	130°
PM2B-3LVE-SD PM2L-3LVE-SD	Warm White	W2*/X1/X2/Y1*	168.4*/192/218.9/249.6*		3.6	2700~4100K	
PM2B-3LBE-SD PM2L-3LBE-SD	Blue	Q*/R/S1*	30.6*/39.8/51.7*		3.6	455~475nm	
PM2B-3LGE-SD PM2L-3LGE-SD	Green	V2*/W1/W2*	120*/130/140*		3.8	515~535nm	
PM2B-3LAE-SD PM2L-3LAE-SD	Amber	U1/U2/V1*	87.4/99.6/113.6*		2.5	587~597nm	
PM2B-3LRE-SD PM2L-3LRE-SD	Red	T2*/U1/U2/V1*	76.6*/87.4/99.6/113.6*		2.5	613.5~631nm	
PM2B-3LCE-SD PM2L-3LCE-SD	Cyan	T2/U1/U2*	76.6/87.4/99.6*		3.8	495~515nm	
PM2B-3LDE-SD PM2L-3LDE-SD	Royal Blue	T*/U/V*	755*/875/1050* mW		3.6	450~460nm	
PM2B-3LEE-SD PM2L-3LEE-SD	Cherry Red	N/P*	18.1/23.5*		2.5	720~740nm	
PM2L-3LLE-LC	UV	S/T/U*	635/755/875* mW		3.4	390~410(λp)nm	

PM2B-3LWE-SD CRI 74

Product Data

Proeon Series

4 Watt Proeon

Part No.	Color	Photometric Luminous Flux Bin	Lumens Flux (Min.)	Test. Current	Vf (V)	CCT/λd(nm)	2θ½ [°]
					Typ.		
PM2B-4LWE-SD PM2L-4LWE-SD	White	X1/X2/Y1*	192/218.9/249.6*	1000mA	3.8	4100~10000K	130°
PM2B-4LVE-SD PM2L-4LVE-SD	Warm White	X1/X2	192/218.9		3.8	2700~4100K	

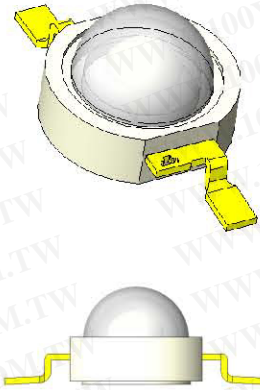
*ask for stock

Proeon High CRI

Part No.	Color	Photometric Luminous Flux Bin	Lumens Flux (Min.)	CRI	Test. Current	Vf (V)	CCT/λd(nm)	2θ½ [°]
						Typ.		
PM2B-1LVE-R7	Warm White	T1*/T2/U1/U2/V1*	67.2*/76.6/87.4/100/110*	77	350mA	3.4	2700~4100K	130°
PM2B-3LVE-R7		V2*/W1/W2/X1*	129.5*/147.7/168.4/192*		700mA	3.6		
PM2B-1LWE-R8	White	T2*/U1/U2/V1/V2*	76.6*/87.4/100/110/120*	84	350mA	3.4	4100~10000K	
PM2B-3LWE-R8		W1*/W2/X1/X2*	147.7*/168.4/192/218.9*		700mA	3.6		
PM2B-1LVE-R8	Warm White	T1/T2/U1/U2/V1*	67.2/76.6/87.4/100/110*	80	350mA	3.4	2700~4100K	
PM2B-3LVE-R8		V2/W1/W2/X1*	129.5/147.7/168.4/192*		700mA	3.6		

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ProLight PM2B-1LxE
1W Power LED
Technical Datasheet
Version: 2.1

Features

- High flux per LED
- Various colors
- Good color uniformity
- **Low-temp. & lead free reflow soldering**
- RoHS compliant
- More energy efficient than incandescent and most halogen lamps
- Low Voltage DC operated
- Instant light (less than 100ns)
- No UV
- Superior ESD protection

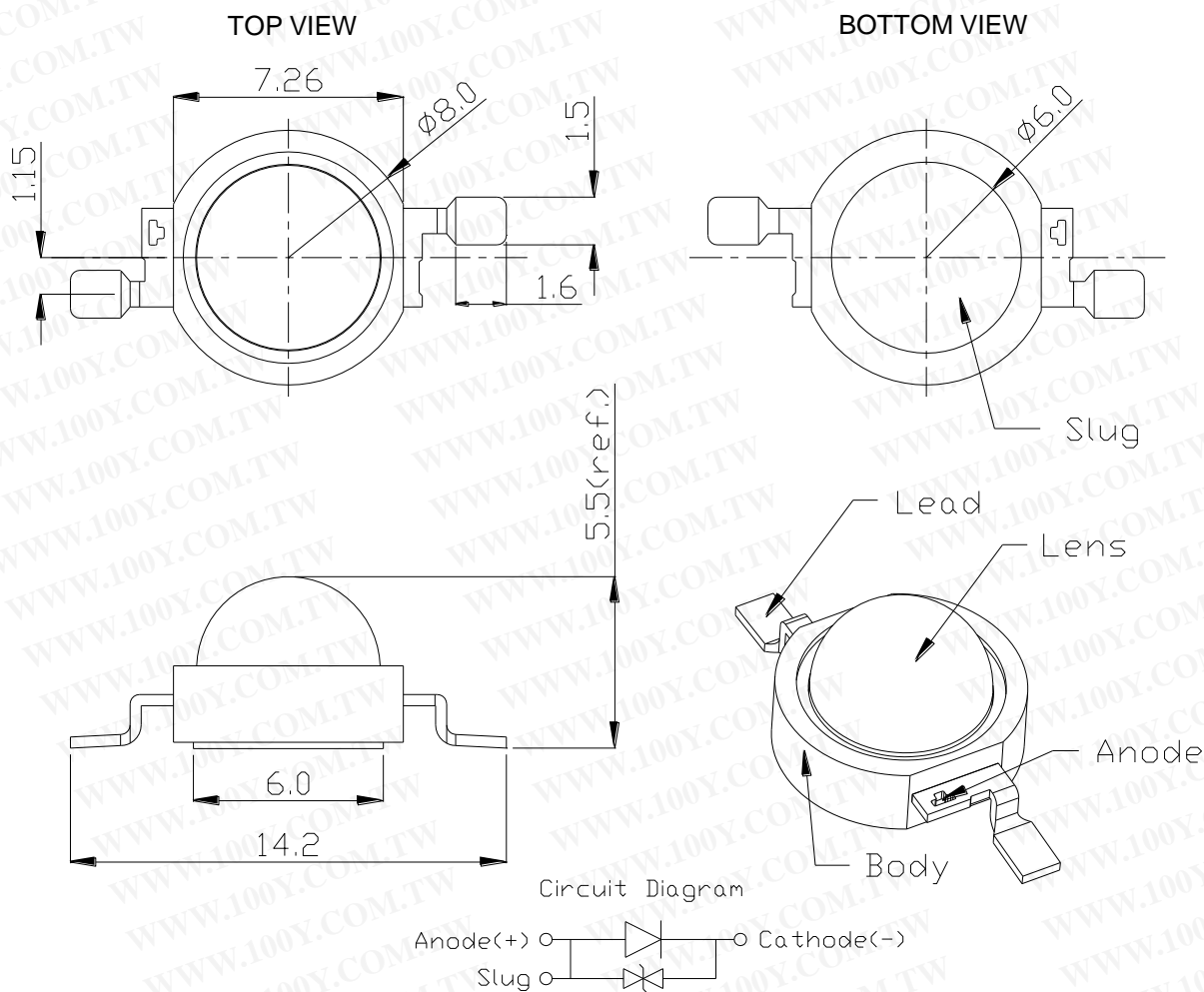
Typical Applications

- Reading lights (car, bus, aircraft)
- Portable (flashlight, bicycle)
- Uplighters/Downlighters
- Decorative/Entertainment
- Bollards/Security/Garden
- Cove/Undershelf/Task
- Indoor/Outdoor Commercial and Residential Architectural
- Automotive Ext (Stop-Tail-Turn, CHMSL, Mirror Side Repeat)
- LCD backlights

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2012/04

Emitter Mechanical Dimensions



Notes:

1. The Anode side of the device is denoted by a hole in the lead frame.
2. Electrical insulation between the case and the board is required --- slug of device is not electrically neutral. Do not electrically connect either the anode or cathode to the slug.
3. Drawing not to scale.
4. All dimensions are in millimeters.
5. All dimendions without tolerances are for reference only.
6. Please do not bend the leads of the LED, otherwise it will damage the LED.
7. **Please do not use a force of over 3kgf impact or pressure on the lens of the LED, otherwise it will cause a catastrophic failure.**

*The appearance and specifications of the product may be modified for improvement without notice.

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Flux Characteristics at 350mA, T_J = 25°C

Radiation Pattern	Color	Part Number Emitter	LumiousFlux or Power	
			Minimum	Typical
Lambertian	White	PM2B-1LWE	87.4 lm	140 lm
	Warm White	PM2B-1LVE	87.4 lm	134 lm
	Crimson	PM2B-1LME	18.1 lm	23 lm
	Red	PM2B-1LRE	39.8 lm	50 lm
	Amber	PM2B-1LAE	39.8 lm	57 lm
	Green	PM2B-1LGE	67.2 lm	82 lm
	Cyan	PM2B-1LCE	58.9 lm	70 lm
	Blue	PM2B-1LBE	13.9 lm	21 lm
	Royal Blue	PM2B-1LDE	355 mW	470 mW
	Cherry Red	PM2B-1LEE	145 mW	180 mW

- ProLight maintains a tolerance of $\pm 10\%$ on flux and power measurements.
- Please do not drive at rated current more than 1 second without proper heat sink.

Electrical Characteristics at 350mA, T_J = 25°C

Color	Forward Voltage V _F (V)			Thermal Resistance Junction to Slug (°C/ W)
	Min.	Typ.	Max.	
White	2.85	3.4	4.1	10
Warm White	2.85	3.4	4.1	10
Crimson	1.75	2.2	3.0	10
Red	1.75	2.2	3.0	10
Amber	1.75	2.2	3.0	10
Green	2.85	3.4	4.1	10
Cyan	2.85	3.4	4.1	10
Blue	2.85	3.4	4.1	10
Royal Blue	2.85	3.4	4.1	10
Cherry Red	1.75	2.2	3.0	10

- ProLight maintains a tolerance of ± 0.1 for Voltage measurements.

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Optical Characteristics at 350mA, T_J = 25°C

Color	Dominant Wavelength λ_D , Peak Wavelength ^[1] λ_P , or Color Temperature CCT			Total included Angle (degrees) $\theta_{0.90V}$	Viewing Angle (degrees) $2 \theta_{1/2}$
	Min.	Typ.	Max.		
White	4100 K	5500 K	10000 K	180	130
Warm White	2700 K	3300 K	4100 K	180	130
Crimson ^[2]	635 nm	640 nm	645 nm	180	130
Red	613.5 nm	623 nm	631 nm	180	130
Amber	587 nm	592 nm	597 nm	180	130
Green	515 nm	525 nm	535 nm	180	130
Cyan	495 nm	505 nm	515 nm	180	130
Blue	455 nm	465 nm	475 nm	180	130
Royal Blue	450 nm	455 nm	460 nm	180	130
Cherry Red ^[1]	720 nm	730 nm	740 nm	180	130

- ProLight maintains a tolerance of $\pm 1\text{nm}$ for dominant wavelength measurements.
- ProLight maintains a tolerance of $\pm 5\%$ for CCT measurements.
- ^[1] Cherry Red product is binned by peak wavelength rather than dominant wavelength.
- ^[2] Dominant wavelength 640nm equals to peak wavelength around 660nm.

Absolute Maximum Ratings

Parameter	White/Warm White/Crimson/Red/ Amber/Green/Cyan/Blue/Royal Blue/Cherry Red
	DC Forward Current (mA)
Peak Pulsed Forward Current (mA)	500
Average Forward Current (mA)	350
ESD Sensitivity (HBM per MIL-STD-883E Method 3015.7)	$\pm 4000\text{V}$ (Class III)
LED Junction Temperature (°C)	120
Aluminum-core PCB Temperature (°C)	105
Storage & Operating Temperature (°C)	-40 to +105
Soldering Temperature(°C)	235°C

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Radiometric Power Bin Structure

Color	Bin Code	Minimum Radiometric Power (mW)	Maximum Radiometric Power (mW)	Available Color Bins
Royal Blue	P	355	435	All
	Q	435	515	All
	R	515	635	[¹]
Cherry Red	K	145	175	All
	L	175	225	[¹]

- ProLight maintains a tolerance of $\pm 10\%$ on flux and power measurements.
- The flux bin of the product may be modified for improvement without notice.
- [¹] The rest of color bins are not 100% ready for order currently. Please ask for quote and order possibility.

Photometric Luminous Flux Bin Structure

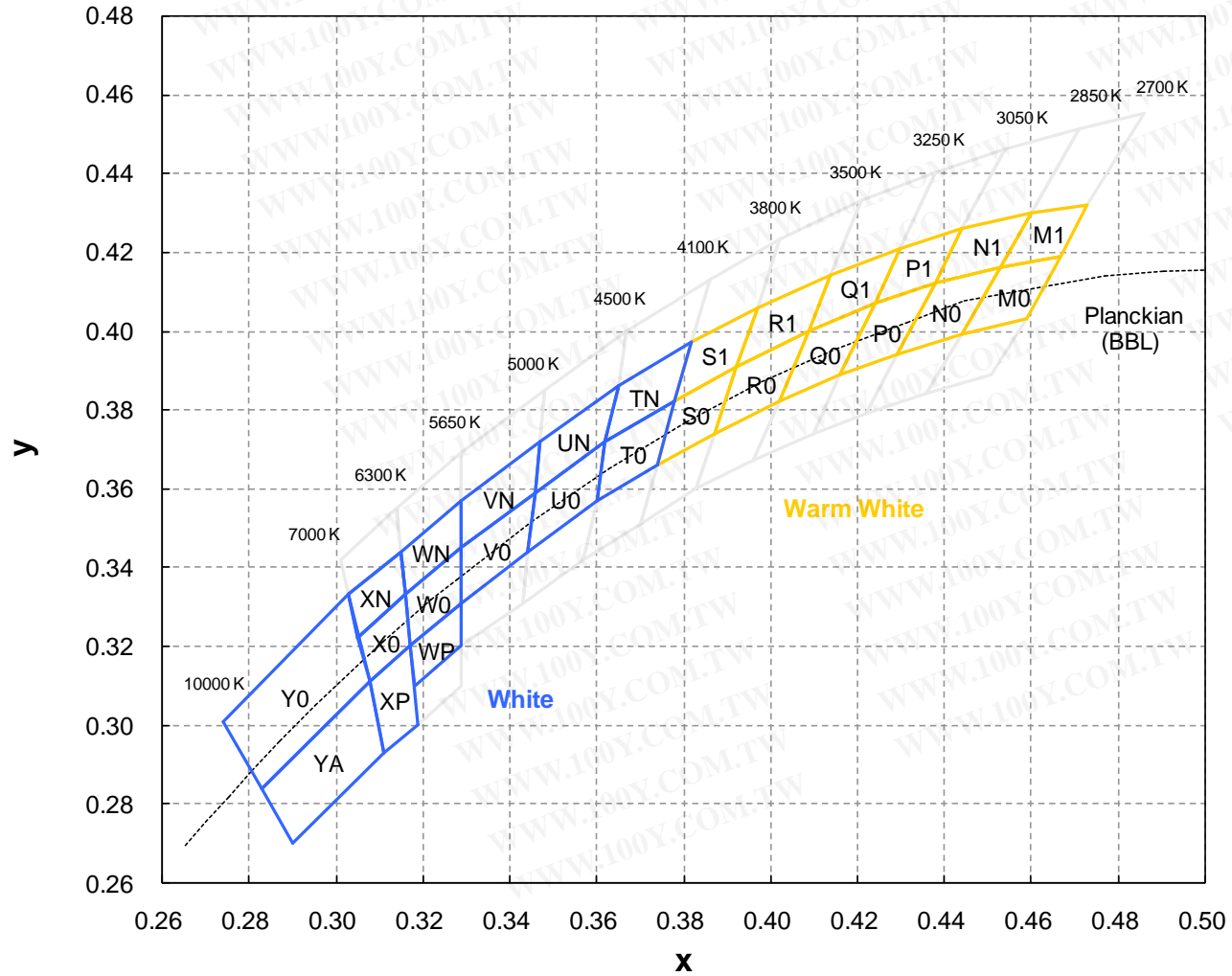
Color	Bin Code	Minimum Photometric Flux (lm)	Maximum Photometric Flux (lm)	Available Color Bins
White	U1	87.4	100	[¹]
	U2	100	110	All
	V1	110	120	All
	V2	120	130	All
	W1	130	140	All
	W2	140	155	Xx,Wx,Vx [¹]
Warm White	U1	87.4	100	[¹]
	U2	100	110	All
	V1	110	120	All
	V2	120	130	All
	W1	130	140	All
	W2	140	155	[¹]
Crimson	N	18.1	23.5	All
	P	23.5	30.6	[¹]
Red	R	39.8	51.7	All
	S1	51.7	58.9	All
	S2	58.9	67.2	[¹]
Amber	R	39.8	51.7	All
	S1	51.7	58.9	All
	S2	58.9	67.2	[¹]
	T1	67.2	76.6	[¹]
Green	T1	67.2	76.6	All
	T2	76.6	87.4	All
	U1	87.4	100	All
	U2	100	110	[¹]
Cyan	S2	58.9	67.2	All
	T1	67.2	76.6	[¹]
	T2	76.6	87.4	[¹]
Blue	M	13.9	18.1	[¹]
	N	18.1	23.5	A,1 [¹]
	P	23.5	30.6	A,1 [¹]

- ProLight maintains a tolerance of $\pm 10\%$ on flux and power measurements.
- The flux bin of the product may be modified for improvement without notice.
- [¹] The rest of color bins are not 100% ready for order currently. Please ask for quote and order possibility.

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Color Bin

White and Warm White Binning Structure Graphical Representation



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Color Bins

White Bin Structure

Bin Code	x	y	Typ. CCT (K)	Bin Code	x	y	Typ. CCT (K)
T0	0.378	0.382	4300	WN	0.329	0.345	5970
	0.374	0.366			0.316	0.333	
	0.360	0.357			0.315	0.344	
TN	0.362	0.372	4300	WP	0.329	0.357	5970
	0.382	0.397			0.329	0.331	
	0.378	0.382			0.329	0.320	
U0	0.362	0.372	4750	X0	0.318	0.310	6650
	0.365	0.386			0.317	0.320	
	0.362	0.372			0.308	0.311	
UN	0.360	0.357	4750	XN	0.305	0.322	6650
	0.344	0.344			0.316	0.333	
	0.346	0.359			0.317	0.320	
V0	0.365	0.386	5320	XP	0.305	0.322	6650
	0.362	0.372			0.303	0.333	
	0.346	0.359			0.315	0.344	
VN	0.347	0.372	5320	Y0	0.316	0.333	8000
	0.329	0.331			0.308	0.311	
	0.329	0.345			0.317	0.320	
W0	0.346	0.359	5970	YA	0.319	0.300	8000
	0.344	0.344			0.311	0.293	
	0.329	0.345			0.308	0.311	
	0.329	0.357			0.283	0.284	
	0.347	0.372			0.274	0.301	
	0.346	0.359			0.303	0.333	
	0.329	0.345			0.308	0.311	
	0.329	0.331			0.311	0.293	
	0.317	0.320			0.290	0.270	
	0.316	0.333			0.283	0.284	

● Tolerance on each color bin (x , y) is ± 0.01

Note: Although several bins are outlined, product availability in a particular bin varies by production run and by product performance. Not all bins are available in all colors.

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Color Bins

Warm White Bin Structure


Bin Code	x	y	Typ. CCT (K)	Bin Code	x	y	Typ. CCT (K)
M0	0.453	0.416	2770	Q0	0.409	0.400	3370
	0.444	0.399			0.402	0.382	
	0.459	0.403			0.416	0.389	
	0.467	0.419			0.424	0.407	
M1	0.460	0.430	2770	Q1	0.414	0.414	3370
	0.453	0.416			0.409	0.400	
	0.467	0.419			0.424	0.407	
	0.473	0.432			0.430	0.421	
N0	0.438	0.412	2950	R0	0.392	0.391	3650
	0.429	0.394			0.387	0.374	
	0.444	0.399			0.402	0.382	
	0.453	0.416			0.409	0.400	
N1	0.444	0.426	2950	R1	0.414	0.414	3650
	0.438	0.412			0.409	0.400	
	0.453	0.416			0.392	0.391	
	0.460	0.430			0.397	0.406	
P0	0.424	0.407	3150	S0	0.392	0.391	3950
	0.416	0.389			0.387	0.374	
	0.429	0.394			0.374	0.366	
	0.438	0.412			0.378	0.382	
P1	0.430	0.421	3150	S1	0.397	0.406	3950
	0.424	0.407			0.392	0.391	
	0.438	0.412			0.378	0.382	
	0.444	0.426			0.382	0.397	

- Tolerance on each color bin (x , y) is ± 0.01

Note: Although several bins are outlined, product availability in a particular bin varies by production run and by product performance. Not all bins are available in all colors.




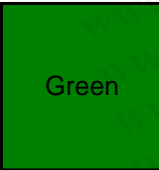



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Peak Wavelength Bin Structure

Color	Bin Code	Minimum Peak Wavelength (nm)	Maximum Peak Wavelength (nm)
	1	720	740

- ProLight maintains a tolerance of ± 1 nm for peak wavelength

Dominant Wavelength Bin Structure

Color	Bin Code	Minimum Dominant Wavelength (nm)	Maximum Dominant Wavelength (nm)
	1	635.0	645.0
	2	613.5	620.5
	4	620.5	631.0
	2	587.0	589.5
	4	589.5	592.0
	6	592.0	594.5
	7	594.5	597.0
	A	515	520
	1	520	525
	2	525	530
	3	530	535
	A	495	500
	1	500	505
	2	505	510
	3	510	515
	A	455	460
	1	460	465
	2	465	470
	3	470	475
	5	450	455
	6	455	460

- ProLight maintains a tolerance of ± 1 nm for dominant wavelength measurements.

Note: Although several bins are outlined, product availability in a particular bin varies by production run and by product performance. Not all bins are available in all colors.

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Forward Voltage Bin Structure

Color	Bin Code	Minimum Voltage (V)	Maximum Voltage (V)
White	A	2.85	3.10
	B	3.10	3.35
	D	3.35	3.60
	E	3.60	3.85
	F	3.85	4.10
Warm White	A	2.85	3.10
	B	3.10	3.35
	D	3.35	3.60
	E	3.60	3.85
	F	3.85	4.10
Crimson	A	1.75	2.00
	B	2.00	2.25
	D	2.25	2.50
	E	2.50	2.75
	F	2.75	3.00
Red	A	1.75	2.00
	B	2.00	2.25
	D	2.25	2.50
	E	2.50	2.75
	F	2.75	3.00
Amber	A	1.75	2.00
	B	2.00	2.25
	D	2.25	2.50
	E	2.50	2.75
	F	2.75	3.00
Green	A	2.85	3.10
	B	3.10	3.35
	D	3.35	3.60
	E	3.60	3.85
	F	3.85	4.10
Cyan	A	2.85	3.10
	B	3.10	3.35
	D	3.35	3.60
	E	3.60	3.85
	F	3.85	4.10
Blue	A	2.85	3.10
	B	3.10	3.35
	D	3.35	3.60
	E	3.60	3.85
	F	3.85	4.10
Royal Blue	A	2.85	3.10
	B	3.10	3.35
	D	3.35	3.60
	E	3.60	3.85
	F	3.85	4.10
Cherry Red	A	1.75	2.00
	B	2.00	2.25
	D	2.25	2.50
	E	2.50	2.75
	F	2.75	3.00

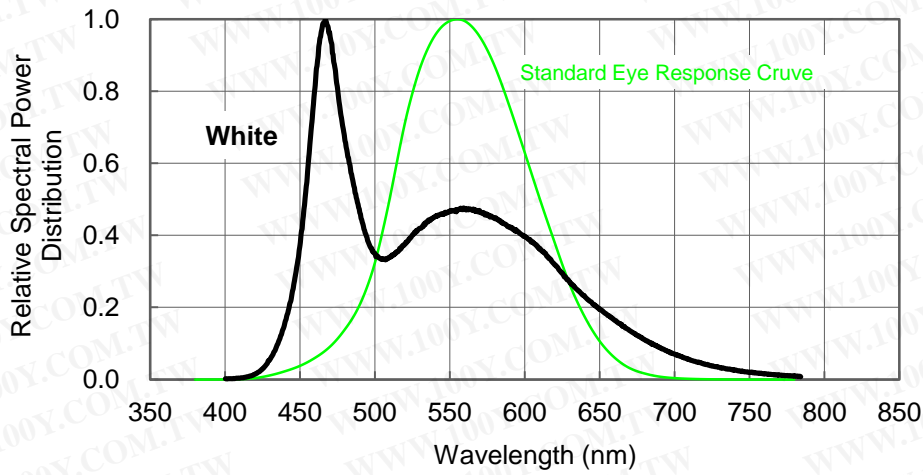
● ProLight maintains a tolerance of ± 0.1 for Voltage measurements.

Note: Although several bins are outlined, product availability in a particular bin varies by production run and by product performance. Not all bins are available in all colors.

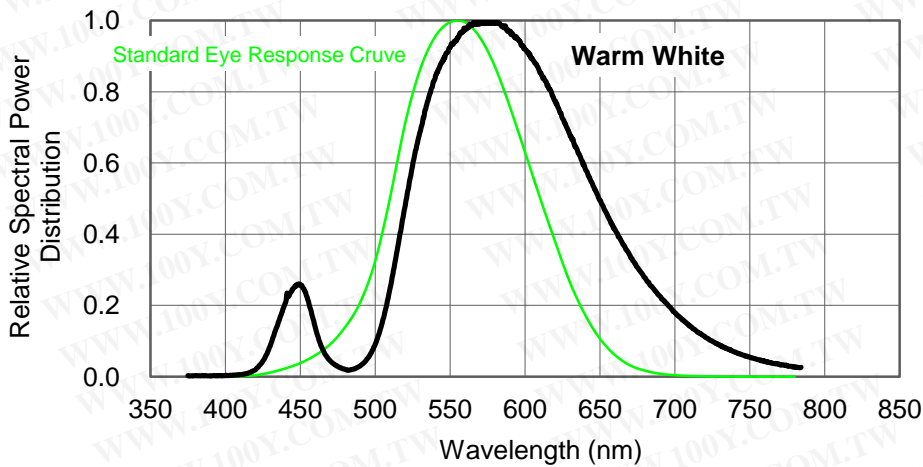
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 勝特力电子(深圳) 86-755-83298787
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Color Spectrum, $T_J = 25^\circ\text{C}$

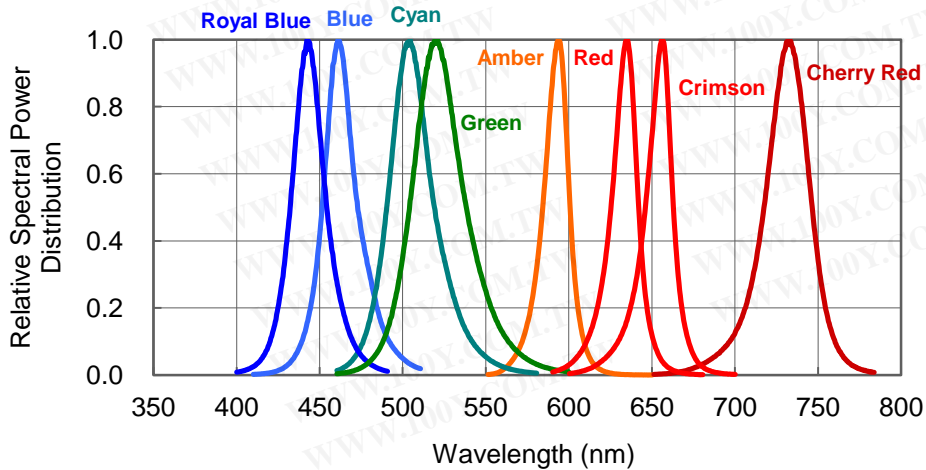
1. White



2. Warm White



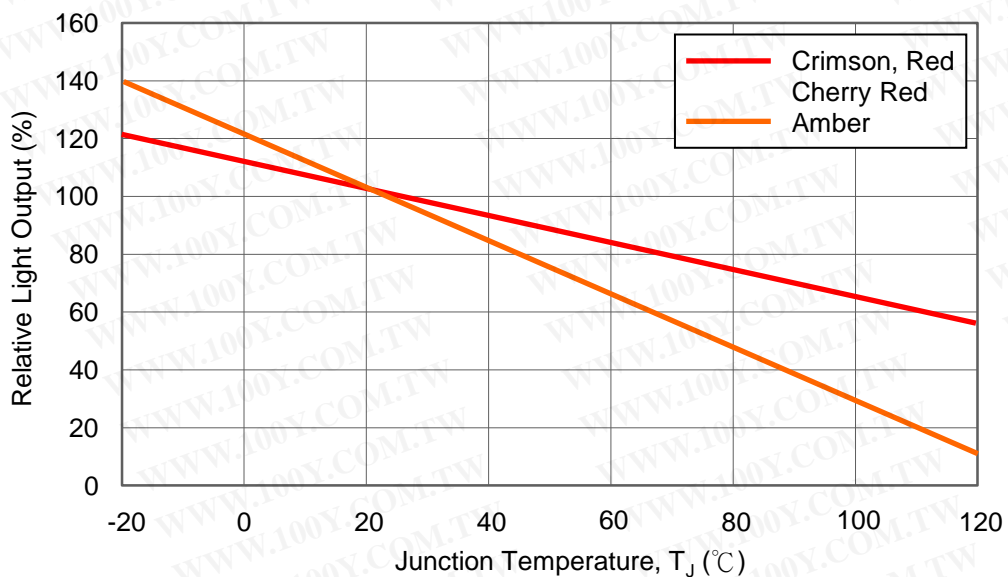
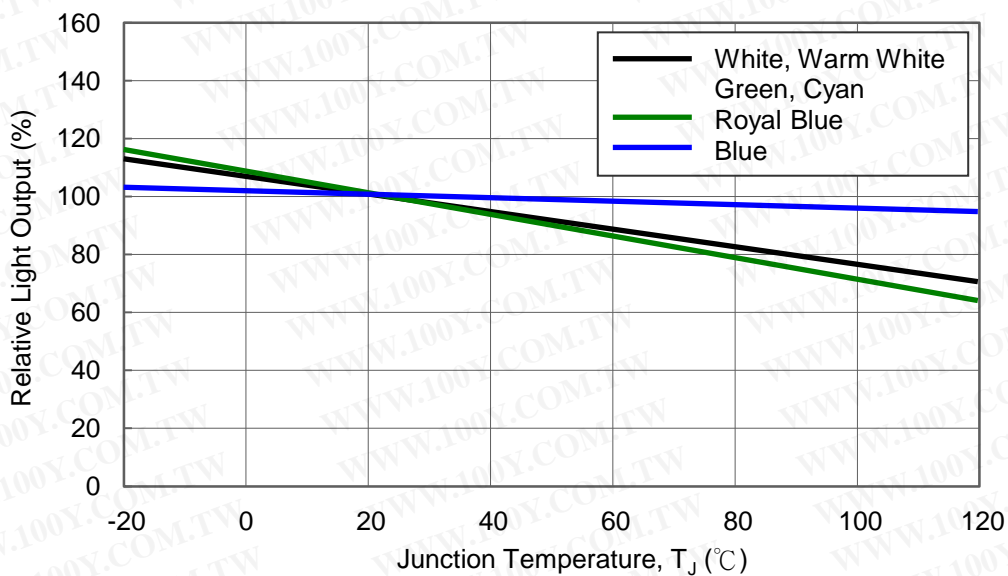
3. Royal Blue 、 Blue 、 Cyan 、 Green 、 Amber 、 Red 、 Crimson 、 Cherry Red



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Light Output Characteristics

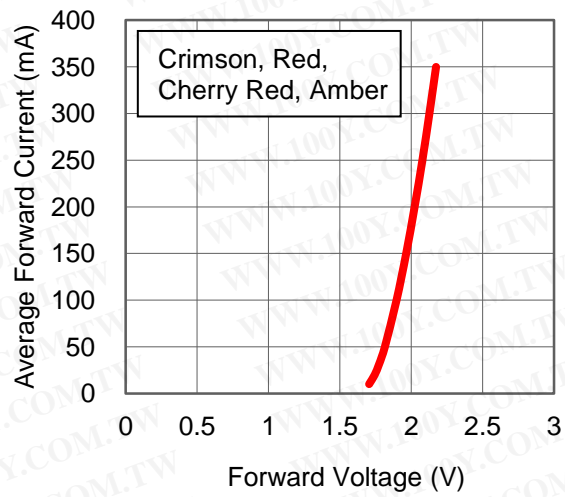
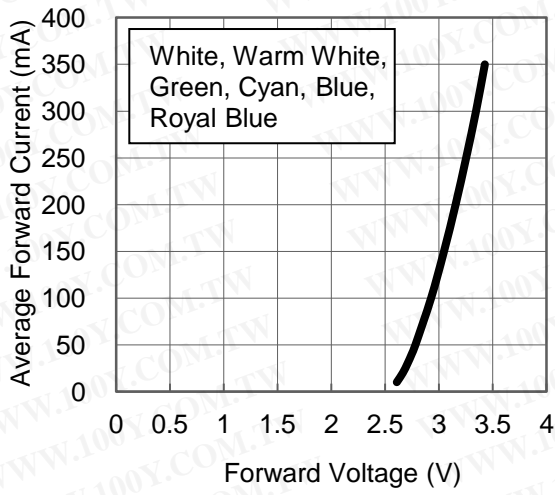
Relative Light Output vs. Junction Temperature at 350mA



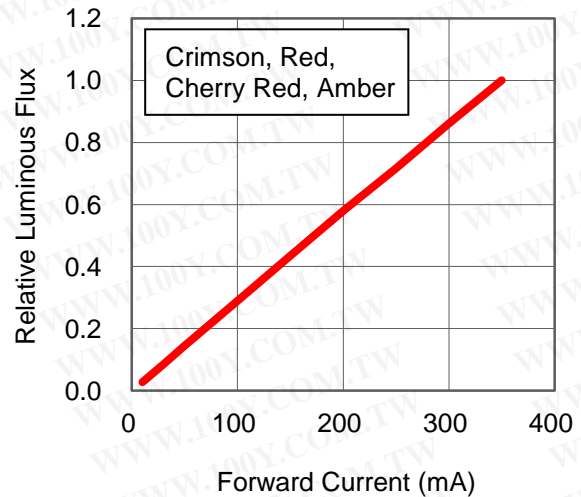
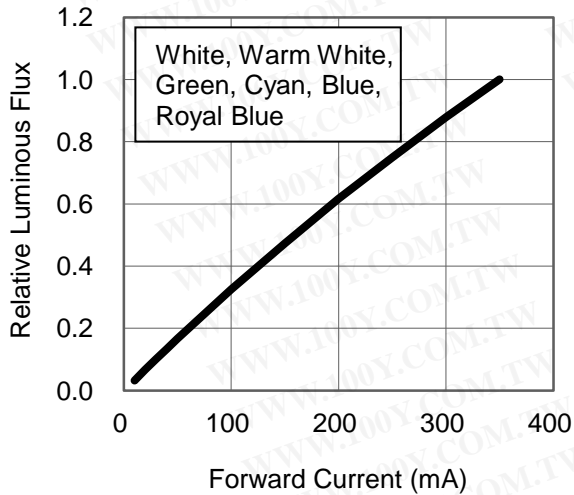
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Forward Current Characteristics, $T_J = 25^\circ\text{C}$

1. Forward Voltage vs. Forward Current



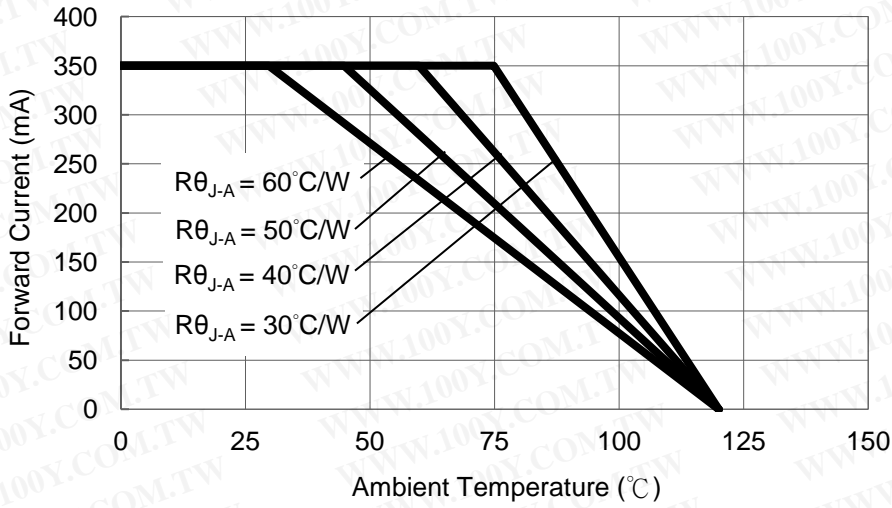
2. Forward Current vs. Normalized Relative Luminous Flux



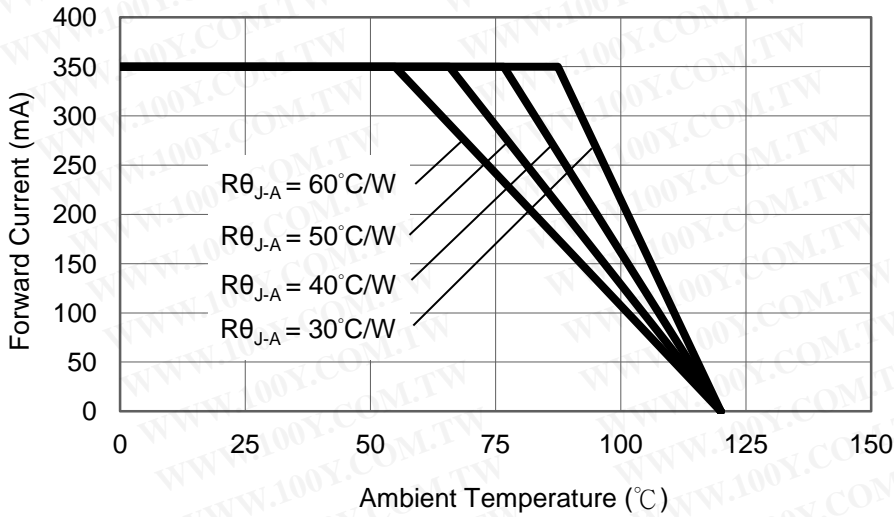
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Ambient Temperature vs. Maximum Forward Current

1. White, Warm White, Green, Cyan, Blue, Royal Blue ($T_{JMAX} = 120^{\circ}C$)



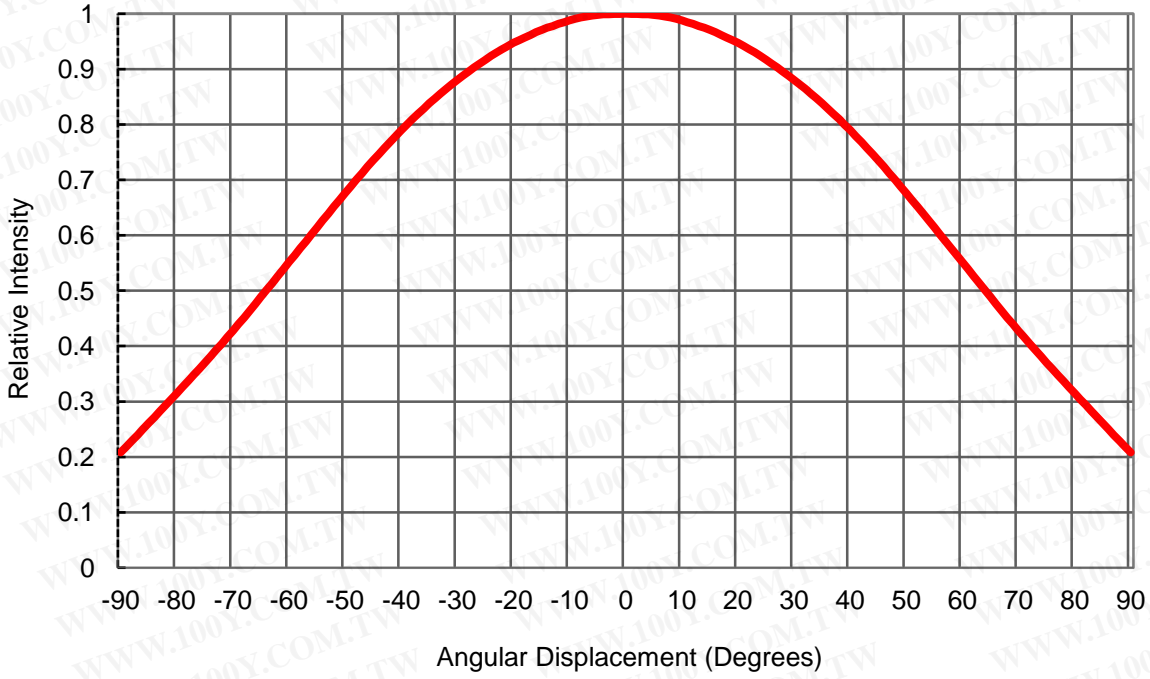
2. Crimson, Red, Amber, Cherry Red ($T_{JMAX} = 120^{\circ}C$)



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Typical Representative Spatial Radiation Pattern

Lambertian Radiation Pattern



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Qualification Reliability Testing

Stress Test	Stress Conditions	Stress Duration	Failure Criteria
Room Temperature Operating Life (RTOL)	25°C, $I_F = \text{max DC}$ (Note 1)	1000 hours	Note 2
Wet High Temperature Operating Life (WHTOL)	85°C/60%RH, $I_F = \text{max DC}$ (Note 1)	1000 hours	Note 2
Wet High Temperature Storage Life (WHTSL)	85°C/85%RH, non-operating	1000 hours	Note 2
High Temperature Storage Life (HTSL)	110°C, non-operating	1000 hours	Note 2
Low Temperature Storage Life (LTSL)	-40°C, non-operating	1000 hours	Note 2
Non-operating Temperature Cycle (TMCL)	-40°C to 120°C, 30 min. dwell, <5 min. transfer	200 cycles	Note 2
Non-operating Thermal Shock (TMSK)	-40°C to 120°C, 20 min. dwell, <20 sec. transfer	200 cycles	Note 2
Mechanical Shock	1500 G, 0.5 msec. pulse, 5 shocks each 6 axis		Note 3
Natural Drop	On concrete from 1.2 m, 3X		Note 3
Variable Vibration Frequency	10-2000-10 Hz, log or linear sweep rate, 20 G about 1 min., 1.5 mm, 3X/axis		Note 3
Solderability	Steam age for 16 hrs., then solder dip at 260°C for 5 sec.		Solder coverage on lead

Notes:

1. Depending on the maximum derating curve.
2. Criteria for judging failure

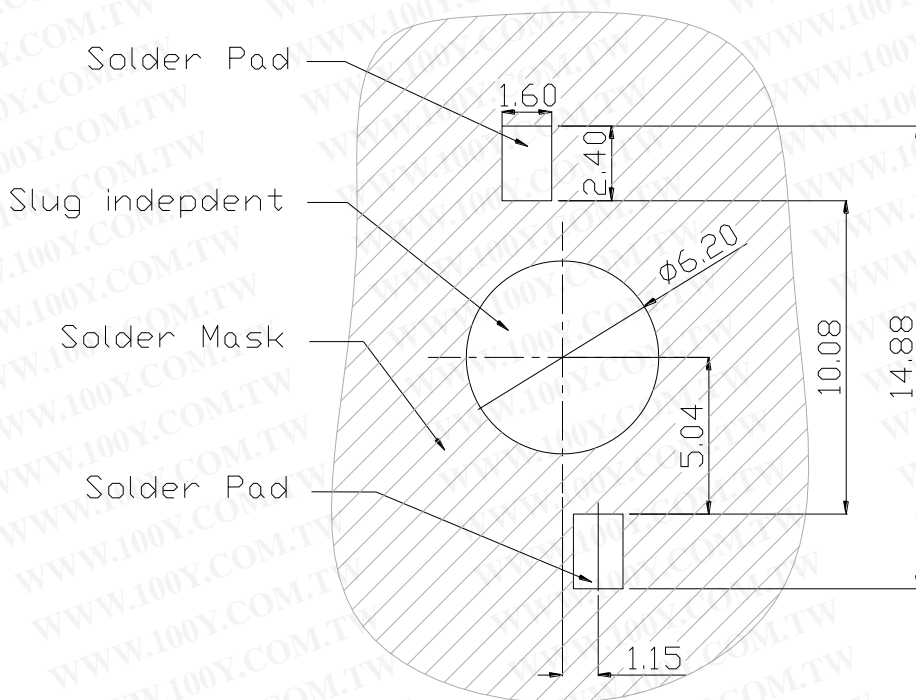
Item	Test Condition	Criteria for Judgement	
		Min.	Max.
Forward Voltage (V_F)	$I_F = \text{max DC}$	--	Initial Level x 1.1
Luminous Flux or Radiometric Power (Φ_V)	$I_F = \text{max DC}$	Initial Level x 0.7	--
Reverse Current (I_R)	$V_R = 5V$	--	50 μA

* The test is performed after the LED is cooled down to the room temperature.

3. A failure is an LED that is open or shorted.

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Recommended Solder Pad Design

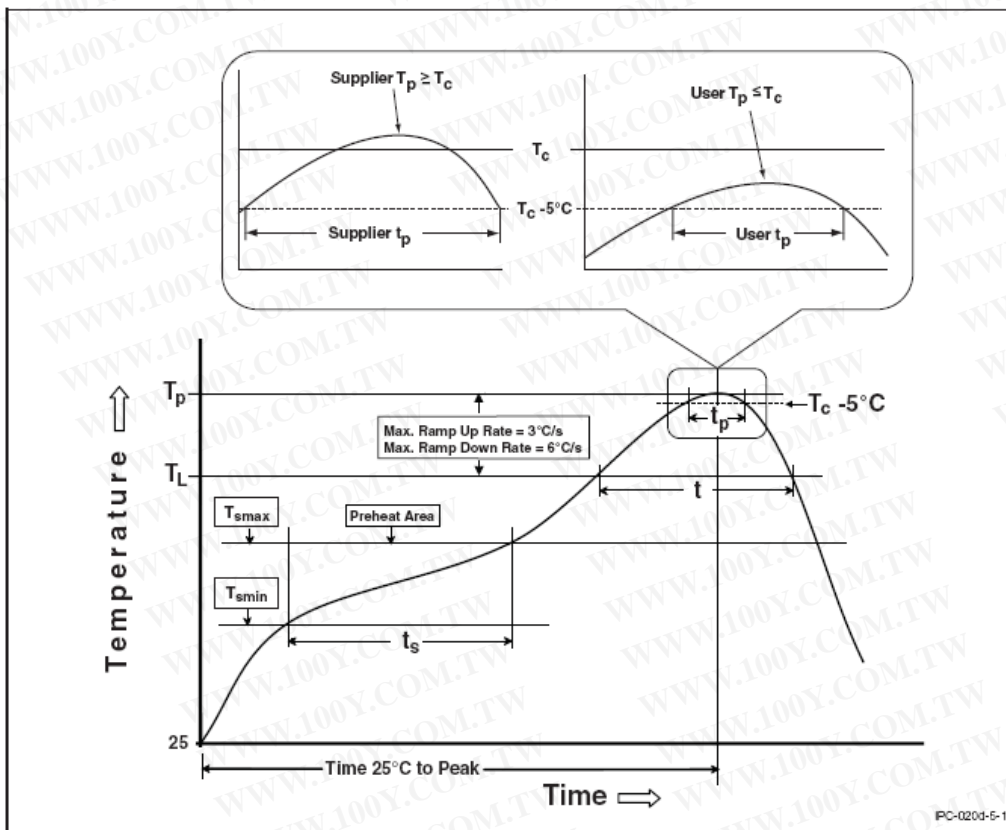


- All dimensions are in millimeters.
- Electrical isolation is required between Slug and Solder Pad.

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Reflow Soldering Condition

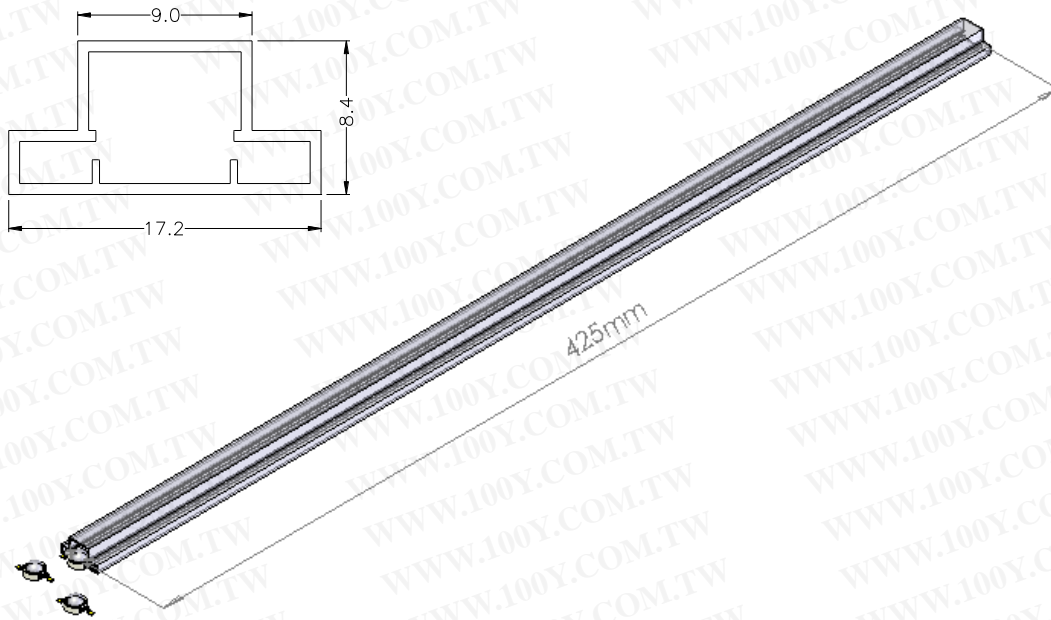
Profile Feature	Sn-Pb Eutectic Assembly	Low-Temp. & Pb-Free Assembly (58Bi-42Sn Eutectic Alloy)
Preheat & Soak		
Temperature min (T_{smin})	100 °C	90 °C
Temperature max (T_{smax})	150 °C	120 °C
Time (T_{smin} to T_{smax})	60-120 seconds	60-120 seconds
Average Ramp-Up Rate (T_{smax} to T_P)	3 °C / second max.	2 °C / second max.
Liquidous temperature (T_L)	183°C	138°C
Time at liquidous (t_L)	60-150 seconds	20-50 seconds
Peak package body temperature (T_P)	235°C	185°C
Time (t_p) within 5°C of the specified classification temperature (T_C)	20 seconds	20 seconds
Average ramp-down rate (T_P to T_{smax})	6 °C/second max.	3 °C/second max.
Time 25°C to Peak Temperature	6 minutes max.	4 minutes max.



- All temperatures refer to topside of the package, measured on the package body surface.
- Repairing should not be done after the LEDs have been soldered. When repairing is unavoidable, a heat plate should be used. It should be confirmed beforehand whether the characteristics of 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.

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Emitter Tube Packaging



Notes:

1. 50 pieces per tube.
2. Drawing not to scale.
3. All dimensions are in millimeters.
4. All dimensions without tolerances are for reference only.

**Please do not open the moisture barrier bag (MBB) more than one week. This may cause the leads of LED discoloration. We recommend storing ProLight's LEDs in a dry box after opening the MBB. The recommended storage conditions are temperature 5 to 30°C and humidity less than 40% RH.

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