



EVERBRIGHT LIMITED

EVERBRIGHT DIP High Power White LED

Model : EV-LRF009C-P1

Company Name: _____

Confirmed By _____

DATE: _____

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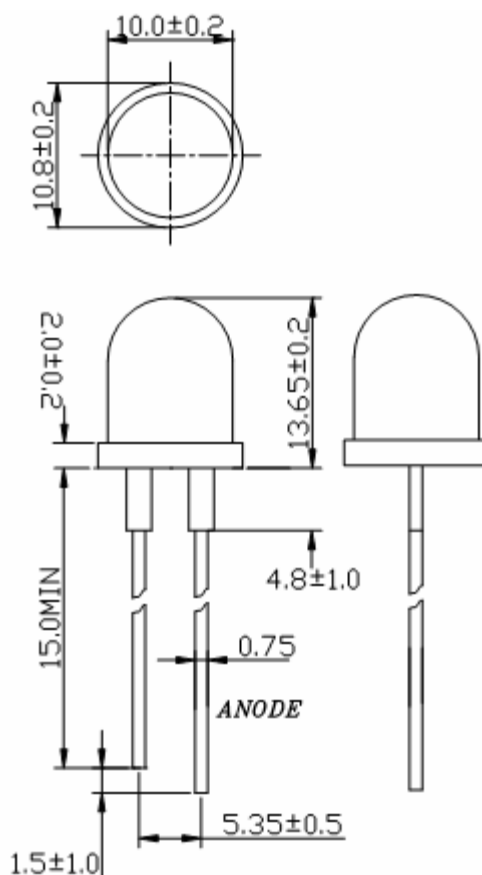
Round LED No: EV-LRF1003W-P1

High Power White LED

Features:

- Standard T-1 3/4 package
- Wide viewing angle
- General purpose leads
- Reliable and rugged

Package Dimension:



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 (.010") mm unless otherwise noted.
3. Protruded resin under flange is 1.0mm (.04") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.
6. Caution in ESD:

Static Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded

※ SPECIFICATIONS

(1) Absolute Maximum Ratings at Ta=25°C

Item	Symbol	Maximum Rating	Unit
Forward Current	IF	50	mA
Pulse Forward Current	IFP	100	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD	250	mW
Operating Temperature	Topr	-20~+80	°C
Storage Temperature	Tstg	-25~+85	°C
Soldering Temperature	Tsld	260°C for 5 Seconds	

* IFP Conditions: Pulse Width ≤10msec. and Duty ≤1/10

(2) Initial Electrical /Optical Characteristics at Ta=25°C

Item		Symbol	Min.	Typ.	Max.	Unit	Test Condition
Forward Voltage		VF	5.5	6.5	7.5	V	IF=40mA
Viewing Angle		2 θ 1/2	---	25	---	Deg	IF=40mA★1
Reverse Current		IR	---	---	10	uA	VR=5V
Luminous flux		φ	4500	8500	12000	mlm	IF=40mA★2
$x = \frac{X}{X+Y+Z} = \frac{Red}{Red+Green+Blue}$		x	0.24	0.28	0.32	---	IF=40mA★3
$y = \frac{Y}{X+Y+Z} = \frac{Green}{Red+Green+Blue}$		y	0.22	0.27	0.35	---	IF=40mA★3
Luminous Intensity	Rank G	IV	5000	---	7500	mcd	IF=40mA★2
	Rank H	IV	7500	---	11000	mcd	IF=40mA★2
	Rank J	IV	11000	---	13000	mcd	IF=40mA★2

★1 θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

★2 Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.

★2 Luminous Intensity & Luminous flux Measurement allowance is ±10%

★3 The dominant wavelength (λd) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

★One delivery will include up to two consecutive color ranks and three luminous intensity ranks of the products . The quantity-ratio of the ranks is decided by EVERBRIGHT LIMITED.

3. RELIABILITY

(1)TEST ITEMS AND RESULTS

Test Item	Test Conditions	Note	Number of Damaged
Resistance to Soldering Heat	Tsld=260±5℃, 10sec. 3mm from the base of the epoxy bulb	1 time	0/500
Solderability	Tsld=235±5℃, 5sec. (using flux)	1 time over 95%	0/500
Thermal Shock	0℃ ~ 100℃ 15sec. 15sec.	100 cycles	0/500
Temperature Cycle	-40. ~25℃ ~100℃ ~ 25℃ 30min. 5min. 30min. 5min.	100 cycles	0/500
Moisture Resistance Cyclic	25℃ ~ 65℃ ~ -10℃ 90%RH 24hrs./1cycle	10 cycles	0/500
Terminal Strength (bending test)	Load 5N(0.5kgf) 0°~90°~0° bend 2 time	No noticeable damage	0/500
Terminal Strength (pull test)	Load 10N(1kgf) 10±1sec.	No noticeable damage	0/500
High Temperature Storage	Ta=100℃	1000hrs	0/500
Temperature Humidity Storage	Ta= 60℃ RH=90%	1000hrs	0/500
Low Temperature Storage	Ta= -40℃	1000hrs	0/500
Steady State Operating Life	Ta= 25℃ IF=50mA	IF=30mA	0/500
Steady State Operating Life of High Humidity Heat	60℃, RH=90%, IF=40mA	0/500	0/500
Steady State Operating Life of Low Temperature	Ta= -30℃, IF=40mA	1000hrs.	0/500

(2)CRITERIA FOR JUDGING THE DAMAGE

Item	Symbol	Test	Criteria for Judgement	
			Min.	Max.
Forward Voltage	VF	IF=40mA	-	U.S.L.*)× 1.1
Reverse Current	IR	VR=5V	-	U.S.L.*) ×2.0
Luminous Intensity	IV	IF=40mA	L.S.L.**) ×0.7	-

*)U.S.L.:Upper Standard Level

**) L.S.L.:Lower Standard Level