P-tec Corporation
2405 Commerce Circle
Alamosa, Colorado 81101
In US: 1-866-695-4162
Outside US: 719-589-3122

DATA SHEET

REV：A DATE：2011-6-1

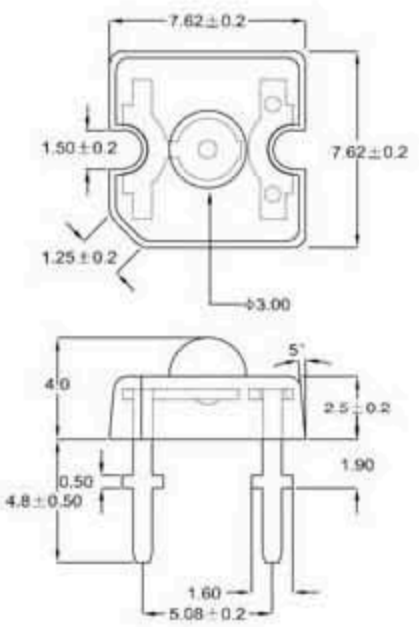
Part No:

PLLM762-WCR01

Features

* High intensity Polygonal LED lamp
* ∅3mm round shape
* UV resistant epoxy

Package Dimensions

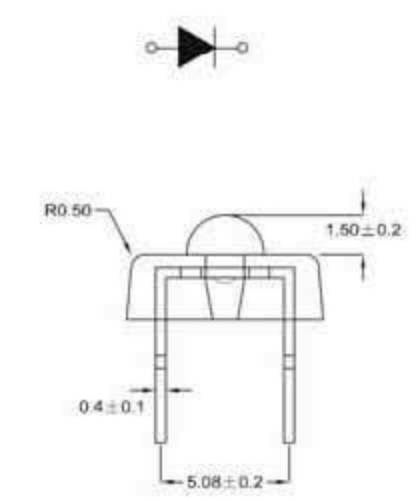


Applications

* LED Lighting
* Automotive Lighting application

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Max	Unit
Power Dissipation	P_D	100	mW
Peak Forward Current *	I_{FP}	100	mA
Continuous Forward Current	I_F	50	mA
Reverse Voltage	V_R	5	V
Operating Temperature Range	Topr	-30℃ to +80℃	
Storage Temperature Range	Tstg	-40℃ to +100℃	
Lead Soldering Temperature △	Tsol	260	℃



Unit：mm

Tolerance are±0.2,unless note otherwise

* Duty ratio max 1/10 Pulse Width max. 0.1ms;

△ At the position of 4mm from the bottom of the package within 5 seconds.

Electrical Optical Characteristics (Ta=25℃，@IF=20mA)

Part No.	Material	Lens	Emitting Color	Forward Voltage (v)		Luminous Intensity (Im)		Dominant Wavelength(nm)		Viewing Angle ($2\theta_{1/2}$)
				Min	Max	Min	Max	Min	Max	
PLLM762-WCR01	AlGaInP	Water Clear	Red	1.8	2.6	1500	3200	620	630	100°

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BIN Table：(Test at 20 mA)

VF (v)	
Code	Range
--	1.8-2.0
--	2.0-2.2
--	2.2-2.4
--	2.4-2.6

IV (mcd)	
Code	Range
20	1500-1900
21	1900-2500
22	2500-3200

Wd(nm)	
Code	Range
R2	620-625
R3	625-630

Luminous Intensity Measurance tolerance are ±10%.
Forward Voltage Measurance tolerance are ±0.05V.
X、Y Measurance tolerance are ±0.005.
Dominant Wavelength Measurance tolerance are ±0.5nm.

Caution in ESD：

1. Static Electricity and surge damages the LEDs. It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs. All devices、Equipment and machinery must be properly grounded.
2. When inspecting own final products on which LEDs were mounted, It is easy to find static-damaged LEDs by light emission test at lower current (below 1mA is recommended) .
3. Damaged LEDs will show some unusual characteristics such as leak current remarkably increases, starting forward voltage becomes lower, or the LEDs get unlighted at the low current.

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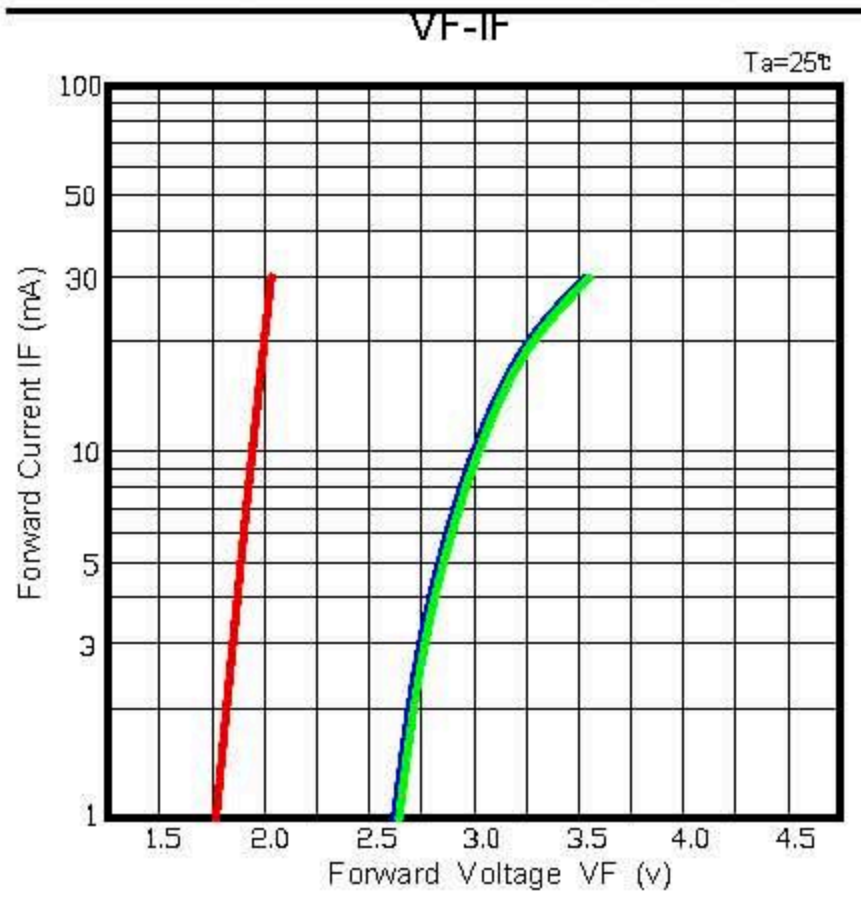
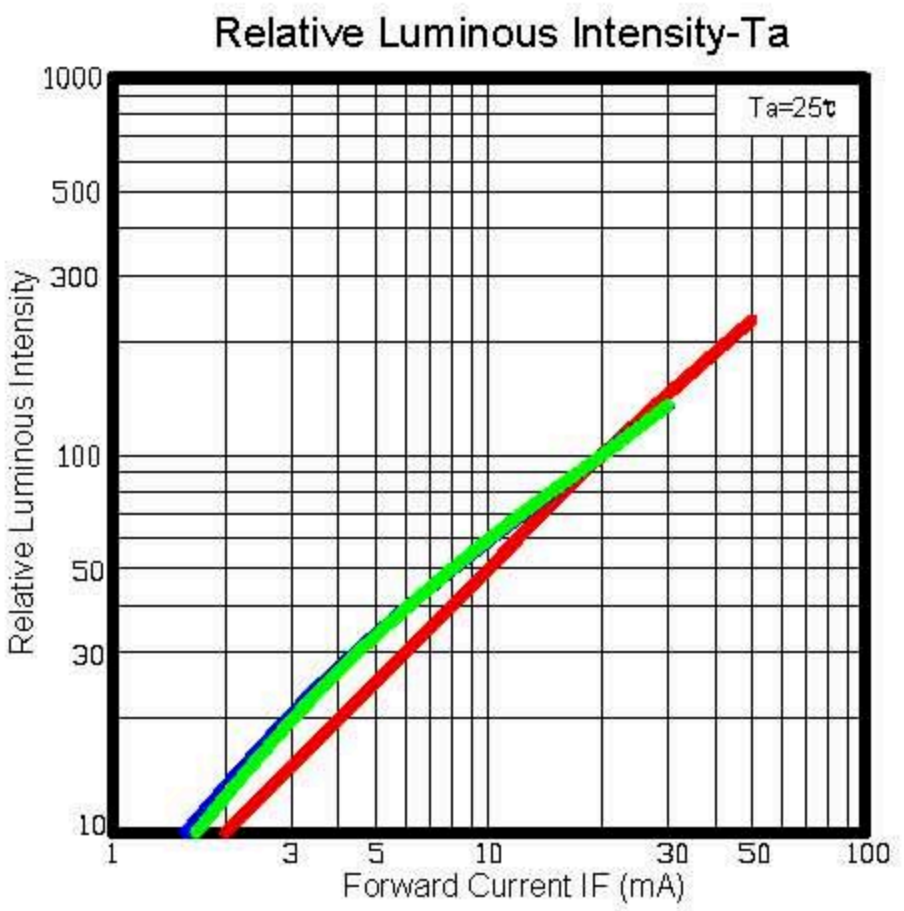
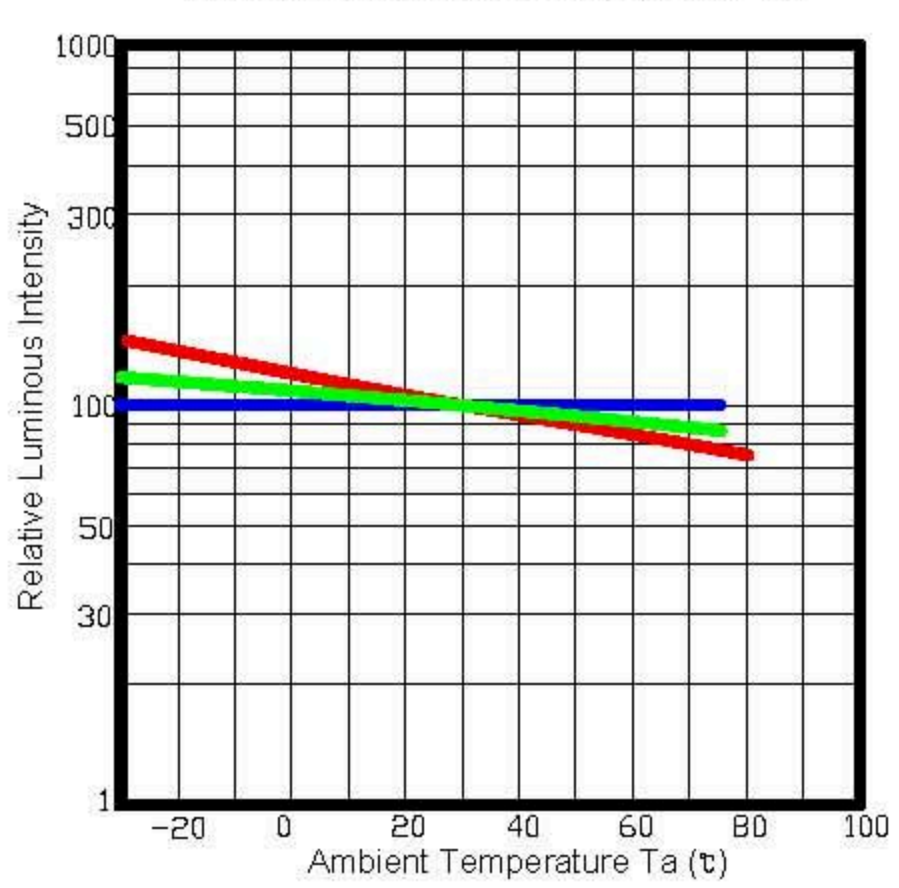
VF-IF



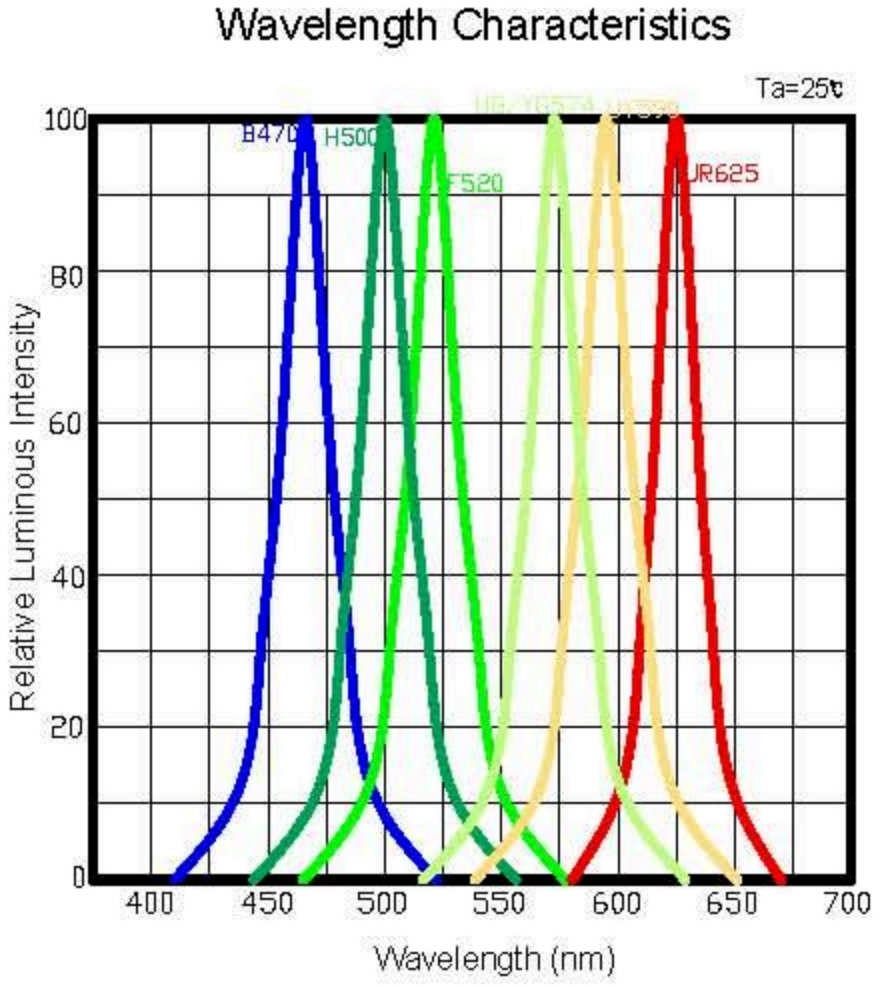
Relative Luminous Intensity-Ta



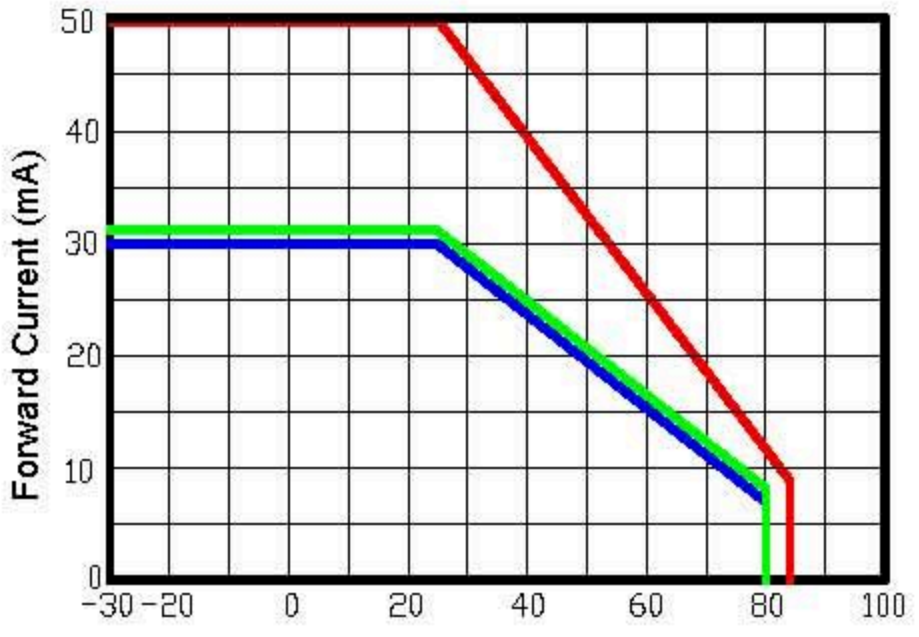
Relative Luminous Intensity-Ta



Wavelength Characteristics



IF-Ta



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Reliability Test

Classification	Test Item	Test Conditions	Sample Size	Num of Damaged	Reference Standard
Endurance Test	Operating Life	I_F=50mA 1000Hrs	22	0	MIL-STD-750:1026 MIL-STD-202:107D JIS C 7021:B-4
	High Temp. High Humidity Storage	85±5℃ 85-90% RH 1000Hrs	100	0	MIL-STD-202:103D JIS C 7021:B-11
	Hi-Temp. Storage	100±5℃ 1000Hrs	100	0	MIL-STD-750:2031 MIL-STD-202:210A JIS C 7021:B-10
	Low-Temp. Storage	-55±5℃ 1000Hrs	100	0	JIS C 7021:B-12
Environmental Test	Temperature Cycling	-40±5℃ 30min Room Temp. 5min 100±5℃ 30min 100 Cycles	100	0	MIL-STD-750:1051 MIL-STD-202:107D JIS C 7021:A-4
	Thermal Shock	-30±5℃ 5min 100±5℃ 5min 100 Cycles	100	0	MIL-STD-750:1051 MIL-STD-202:107D JIS C 7021:A3
	Solderability	230±5℃ Dwell Time≤5sec	22	0	MIL-STD-202:208D MIL-STD-750:2026 MIL-STD-883:2003 JIS C 7021:A-2
	Solder Resistance	260±5℃ 10±1sec	22	0	MIL-STD-750:2031 MIL-STD-202:210A JIS C 7021:A-1

Criteria for Judging The Damage:

Item	Symbol	Test Conditions	Criteria for Judgment	
			Min	Max
Forward Voltage	V_F	I_F=20mA	_	U.S.L*1.1
Reverse Current	I_R	V_R=5V	_	U.S.L*2.0
Luminous Intensity	Iv	I_F=20mA	L.S.L*0.7	_

PS: **U.S.L.**:Upper Standard Level **L.S.L.**:Lower Standard Level