

Preliminary

RL50AWC2E-003 LED5V-CW

DATA SHEET



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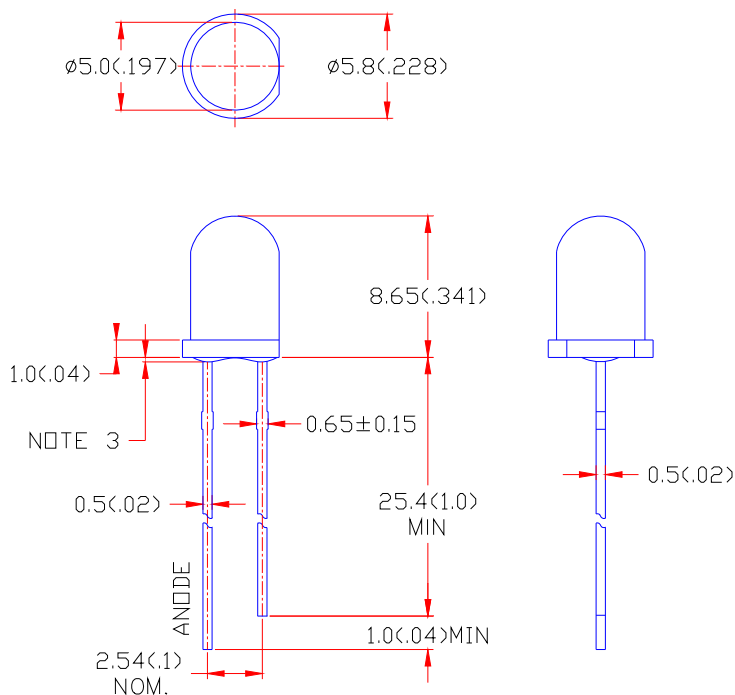
Part No.	RL50AWC2E-003	Spec No.	S/N-21091601	Page	1 of 4
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Version:1.0

Features:

- ◆ High intensity
- ◆ 5mm diameter package
- ◆ General purpose leads
- ◆ Pb-free

Package Dimensions:



Part NO.	Chip Material	Lens Color	Emission Color
RL50AWC2E-003	InGaN	Water Clear	Super Bright White

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 mm (.010") 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. Precautions for ESD:
Static electricity and surges can damage the LED. It is recommended to use an anti-electrostatic wrist band or glove when handling the LED. All devices, equipment and machinery must be properly grounded.
7. This data-sheet only valid for six months.

Absolute Maximum Ratings at Ta=25°C

Parameter	MAX.	Unit
Power Dissipation	140	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current	20	mA
Derating Linear From 50°C	0.4	mA/°C
Reverse Voltage	5	V
Electrostatic Discharge (ESD)	2000	V
Operating Temperature Range	-20°C to +80°C	
Storage Temperature Range	-30°C to +100°C	
Lead Soldering Temperature [4mm(.157") From Body]	255±5°C for 5 Seconds	
Wave Soldering Temperature	Peak Temperature 245°C~260°C for 10 Seconds	

Electrical Optical Characteristics at Ta=25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _v	40000	60000		mcd	I _F =20mA (Note 1)
Viewing Angle	2θ _{1/2}	10	15	20	Deg	(Note 2)
Forward Voltage	V _F		4.9	7	V	I _F =20mA
Reverse Current	I _R			10	μA	V _R =5V

Color Rank	x	y	x	y	x	y	x	y
BIN 1A	0.4378	0.4039	0.4525	0.408	0.4698	0.4399	0.453	0.4355
BIN 2B	0.4226	0.3728	0.4359	0.3776	0.4525	0.408	0.4378	0.4039
BIN 2A	0.4242	0.399	0.4378	0.4039	0.453	0.4355	0.438	0.4312
BIN 2B	0.4103	0.3669	0.4226	0.3728	0.4378	0.4039	0.4242	0.399
BIN 3A	0.4116	0.3938	0.4242	0.399	0.438	0.4312	0.4245	0.4263
BIN 3B	0.3993	0.3613	0.4103	0.3669	0.4242	0.399	0.4116	0.3938
BIN 4A	0.4006	0.3885	0.4116	0.3938	0.4245	0.4263	0.4112	0.4196
BIN 4B	0.3894	0.3555	0.3993	0.3613	0.4116	0.3938	0.4006	0.3885

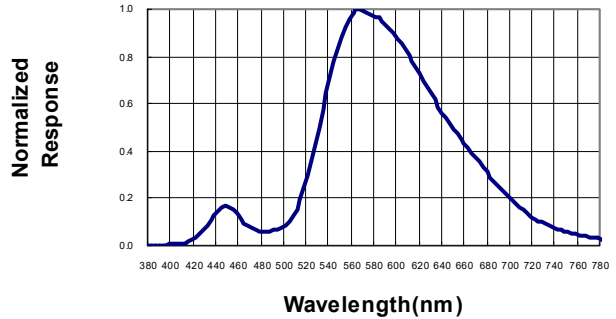
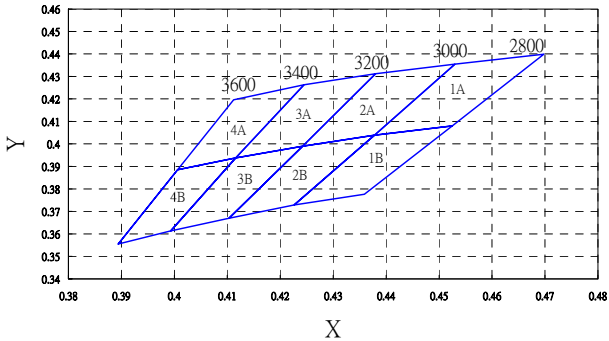
Notes:

- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- θ_{1/2} is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- Forward voltage measurement allowance is ±0.1V
- Luminous Intensity Measurement Allowance is ±10%

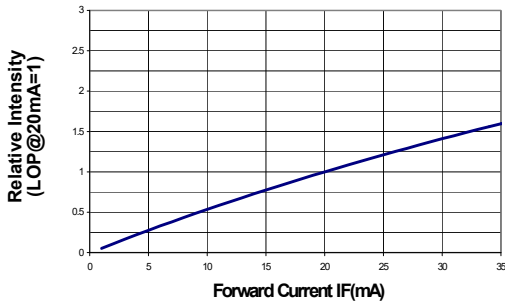
Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

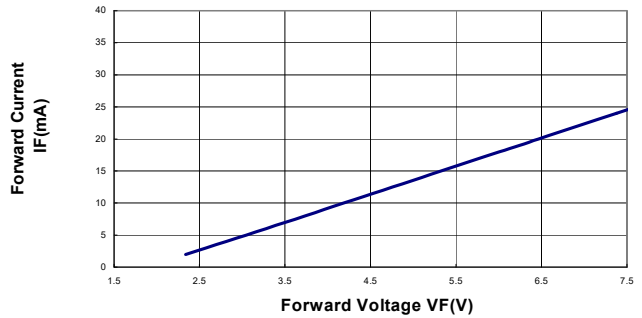
CIE 1931 Chromaticity Diagram



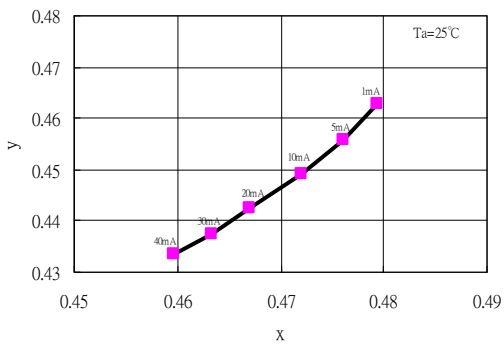
Relative Luminous Intensity vs Forward Current



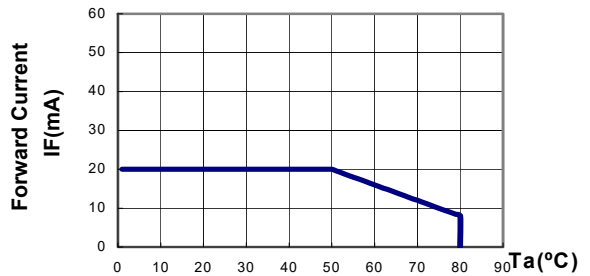
Forward Current vs Forward Voltage



Forward Current VS. Chromaticity coordinate



Forward Current Derating Curve



Beam Pattern

