

ВЫВОДНОЙ СВЕТОДИОД КРУГЛЫЙ

ARL-5613IRAC

FEATURES

- High reliability.
- High radiant intensity.
- Peak wavelength $\lambda_p = 940$ nm.
- Low forward voltage.
- Pb free.

DESCRIPTIONS

- HYLEM Infrared Emitting Diode is a high intensity diode, molded in a blue transparent plastic package.
- The device is spectrally matched with phototransistor, photodiode and infrared receiver module.

APPLICATIONS

- Free air transmission system.
- Infrared remote control units with high power requirement.
- Smoke detector.
- Infrared applied system.

DEVICE SELECTION GUIDE

LED Part No.	CHIP		Lens Color
	Material	Emitted Color	
ARL-5613IRAC	AlGaAs	Infrared	Blue Transparent



5 mm



CLEAR



INFRARED



USAGE NOTES:

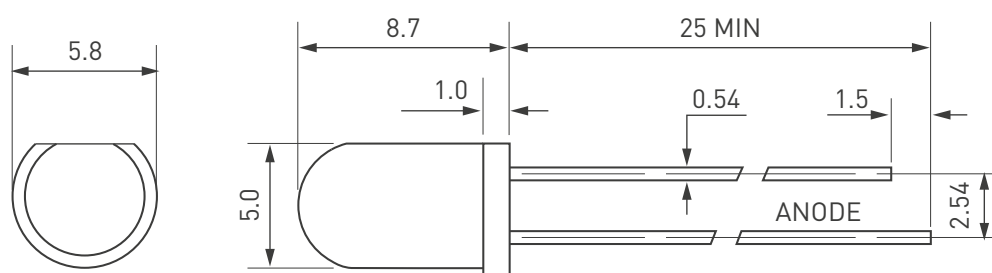
Surge will damage the LED.

When using LED, it must use a protective resistor in series with DC current about 20 mA.



ATTENTION!
ELECTROSTATIC SENSITIVE DEVICES.
OBSERVE PRECAUTIONS FOR HANDLING.

PACKAGE DIMENSIONS



Unit: mm.

Notes:

Other dimensions are in millimeters, tolerance is 0.25 mm except being specified.

Protruded resin under flange is 1.5 mm, max LED.

Bare copper alloy is exposed at tie-bar portion after cutting.

ABSOLUTE MAXIMUM RATING ($T_A = +25^\circ\text{C}$)

Parameter	Symbol	Absolute Maximum Rating	Unit
Forward Pulse Current	I_{FPM}	100	mA
Forward Current	I_{FM}	30	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	140	mW
Operating Temperature	T_{opr}	-40... +80	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40... +100	$^\circ\text{C}$
Soldering Heat (5s)	T_{sol}	260	$^\circ\text{C}$

ELECTRO-OPTICAL CHARACTERISTICS ($T_A = +25^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Radiant Intensity	E_e	—	12	—	mW/Sr	$I_f=20\text{mA}$ (Note 1)
Viewing Angle	$2\theta_{1/2}$	—	30	40	Deg	Note 2
Peak Emission Wavelength	λ_P	—	940	—	nm	$I_f=20\text{mA}$
Spectral Line Half-Width	$\Delta\lambda$	15	20	25	nm	$I_f=20\text{mA}$
Forward Voltage	V_F	1.0	—	1.5	V	$I_f=20\text{mA}$
Reverse Current	I_R	—	—	10	μA	$V_R=5\text{V}$

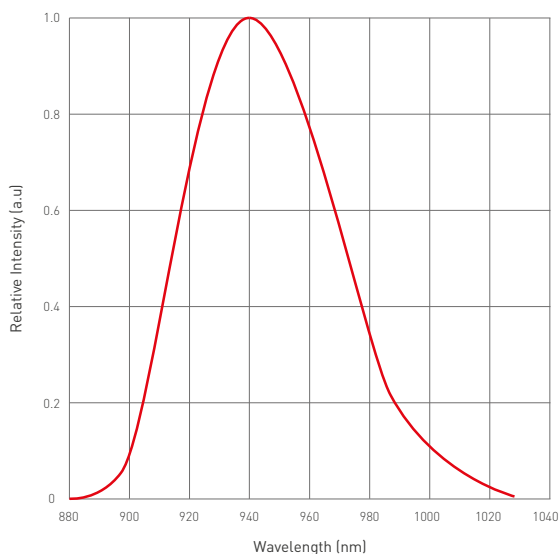
Note:

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

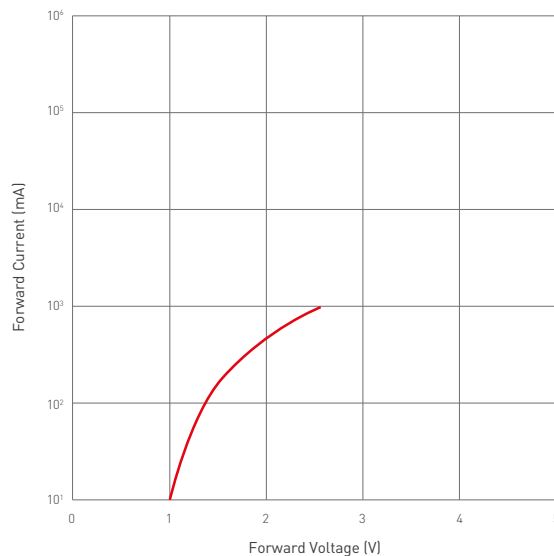
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVES

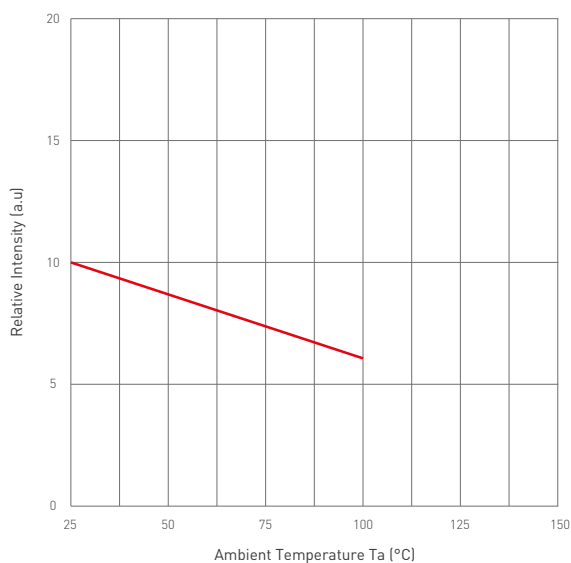
Relative Intensity VS Wavelength



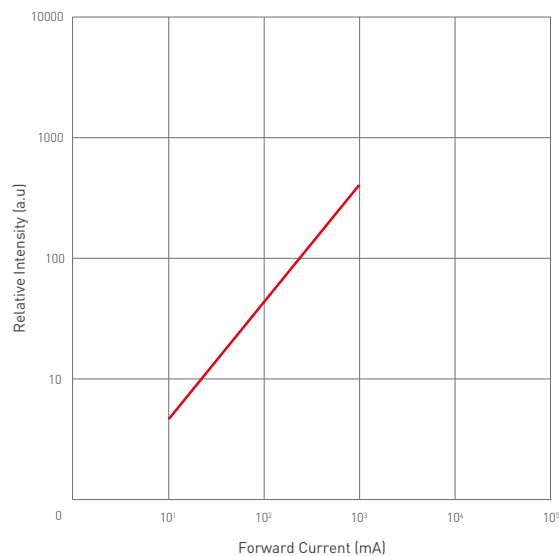
Forward Current VS Forward Voltage



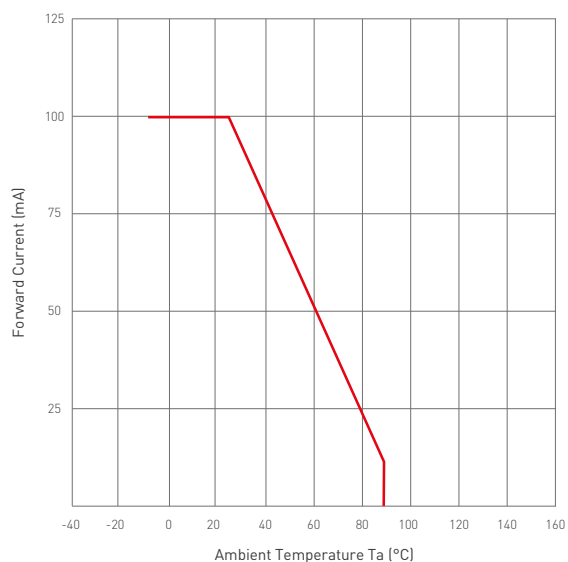
Relative Intensity VS Ambient Temp



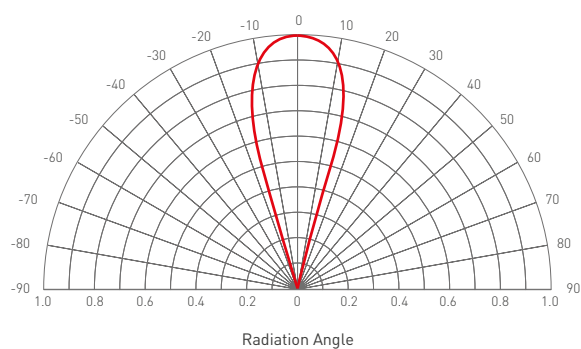
Forward Current VS Relative Intensity



Forward Current VS Ambient Temp



Radiation Characteristics



NOTES

1. Above specification may be changed without notice. HYLEd will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. HYLEd assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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