

Red LED/Infrared LED L5766/L6287

Miniature LED



L5766 is a red LED molded into a clear plastic package that emits light at a peak wavelength of 660 nm. L6287 is a high-power infrared LED having the same type of package that emits light at a peak wavelength of 940 nm.

Features

- L5766: Red LED (peak emission wavelength: 660 nm)
- L6287: High-power infrared LED (peak emission wavelength: 940 nm)
- Miniature plastic package with lens

Applications

- Displacement meters
- Optical proximity switches
- Low-speed optical links (L5766)

■ Absolute maximum ratings (Ta=25 °C)

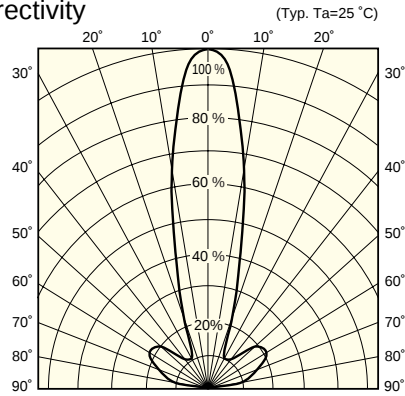
Parameter	Symbol	Condition	L5766	L6287	Unit
Forward current	IF		60		mA
Reverse voltage	VR		5		V
Pulse forward current	IFP	Pulse width: 100 μ s Duty ratio: 1 %	0.5	1.0	A
Power dissipation	P		90		mW
Operating temperature	Topr		-25 to +85		°C
Storage temperature	Tstg		-30 to +85		°C
Soldering	-		260 °C, 3 s at least 2.5 mm away from package surface		-

■ Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	L5766			L6287			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Peak emission wavelength	λ_p	IF=20 mA	-	660	-	-	940	-	nm
Spectral half width	$\Delta\lambda$	IF=20 mA	-	20	-	-	60	-	nm
Forward voltage	VF	IF=20 mA	-	1.8	2.3	-	1.25	1.45	V
Reverse current	IR	VR=5 V	-	-	10	-	-	10	μ A
Fiber coupled optical power *	Po	IF=20 mA	8	-	-	-	-	-	μ W
Radiant flux	ϕ_e	IF=20 mA	-	-	-	1.4	-	-	mW
Terminal capacitance	Ct	VR=0 V, f=1 MHz	-	30	-	-	20	-	pF
Rise time	tr	IF=20 mA	-	-	300	-	-	-	ns
Fall time	tf	IF=20 mA	-	-	300	-	-	-	ns

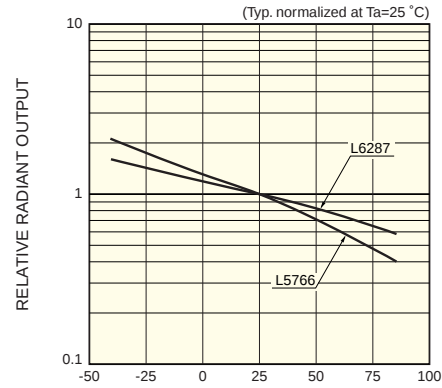
* Optical fiber: APF 485/500 μ m, L=1 m, open area ratio=0.5; Measurement conditions: The center of the optical fiber is aligned with the center of the lens on the package. The distance between the fiber end and the lens top is 0.2 mm.

Directivity



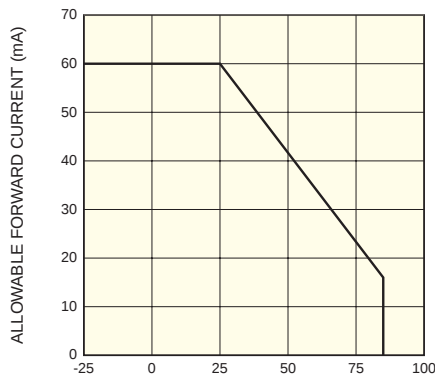
RELATIVE RADIANT OUTPUT KLEDB0061EA

Radiant output vs. ambient temperature



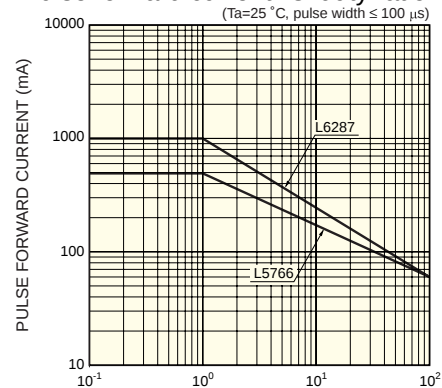
AMBIENT TEMPERATURE ($^\circ\text{C}$) KLEDB0106EA

Allowable forward current vs. ambient temperature



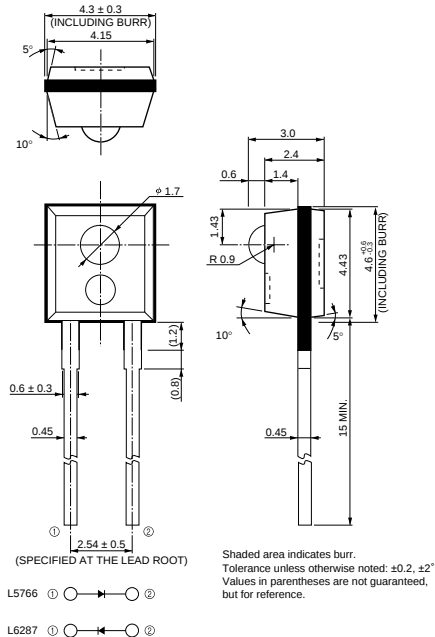
AMBIENT TEMPERATURE ($^\circ\text{C}$) KLEDB0083EA

Pulse forward current vs. duty ratio



DUTY RATIO (%) KLEDB0107EA

Dimensional outline (unit: mm)



KLEDA0024EA

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Type numbers of products listed in the specification sheets or supplied as samples may have a suffix "(X)" which means tentative specifications or a suffix "(Z)" which means developmental specifications. ©2010 Hamamatsu Photonics K.K.

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