

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)

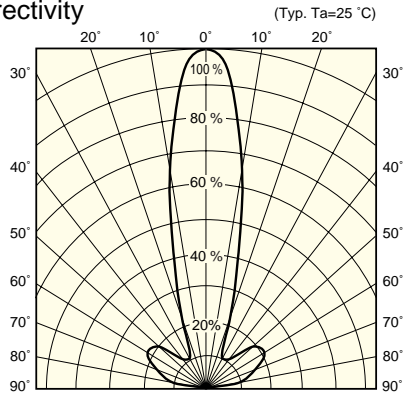
Parameter	Symbol	Condition	L5766	L6287	Unit
Forward current	IF		60		mA
Reverse voltage	VR		5		V
Pulse forward current	IFP	Pulse width: 100 μs Duty ratio: 1 %	0.5	1.0	A
Power dissipation	P		90		mW
Operating temperature	Topr		-25 to +85		°C
Storage temperature	Tstg		-30 to +85		°C
Soldering	-		260 °C, 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	μA
Fiber coupled optical power *	Po	IF=20 mA	8	-	-	-	-	-	μW
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

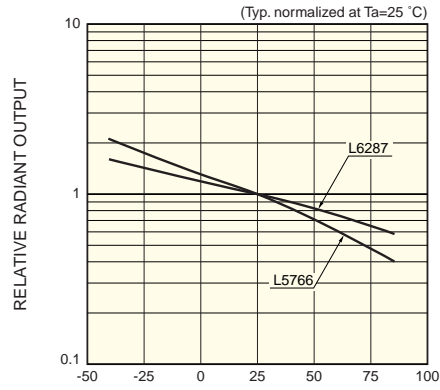
* Optical fiber: APF 485/500 μm, L=1 m, open area ratio=0.5; Measurement conditions: The center of the optical fiber is aligned with the center of the lens on the package. The distance between the fiber end and the lens top is 0.2 mm.

■ Directivity



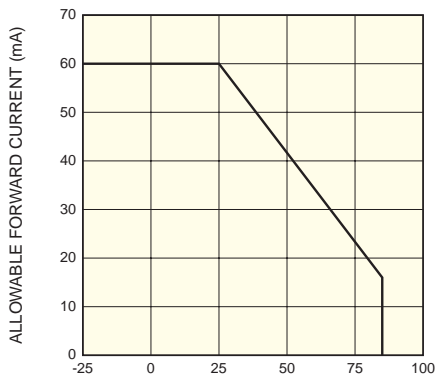
RELATIVE RADIANT OUTPUT
KLEDB0061EA

■ Radiant output vs. ambient temperature



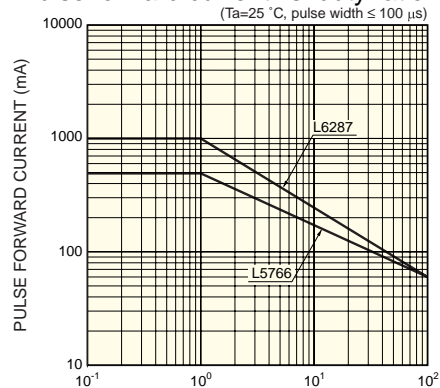
AMBIENT TEMPERATURE ($^\circ\text{C}$)
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■ Allowable forward current vs. ambient temperature



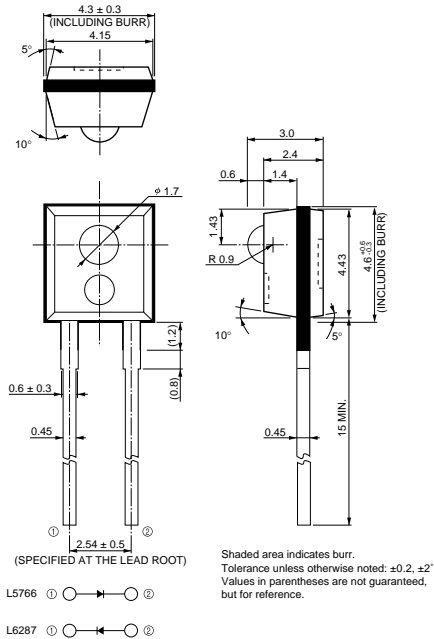
AMBIENT TEMPERATURE ($^\circ\text{C}$)
KLEDB0083EA

■ Pulse forward current vs. duty ratio



DUTY RATIO (%)
KLEDB0107EA

■ Dimensional outline (unit: mm)



KLEDA0024EA



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