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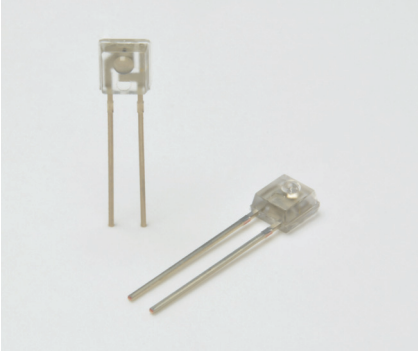
Red LED/Infrared LED



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)

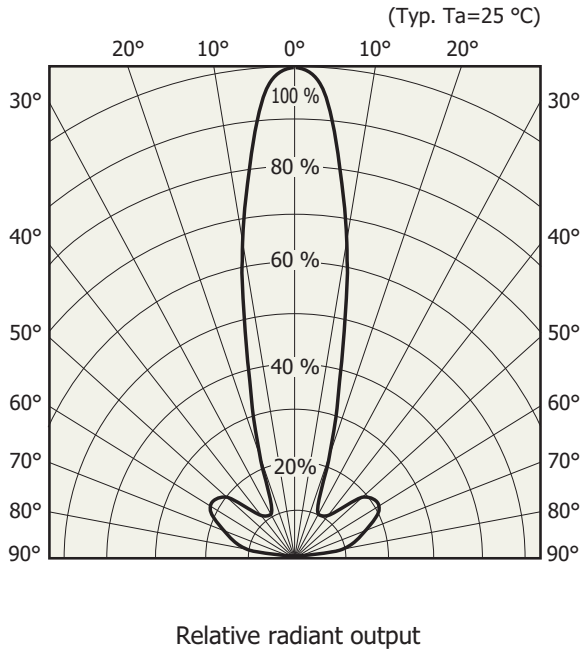
Parameter	Symbol	Condition	L5766	L6287	Unit
Forward current	I_F		60		mA
Reverse voltage	V_R		5		V
Pulse forward current	I_{FP}	Pulse width: 100 µs Duty ratio: 1 %	0.5	1.0	A
Power dissipation	P		90		mW
Operating temperature	Topr		-25 to +85		°C
Storage temperature	Tstg		-30 to +85		°C

Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	L5766			L6287			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Peak emission wavelength	λp	I_F=20 mA	-	660	-	-	940	-	nm
Spectral half width	Δλ	I_F=20 mA	-	20	-	-	60	-	nm
Forward voltage	V_F	I_F=20 mA	-	1.8	2.3	-	1.25	1.45	V
Reverse current	I_R	V_R=5 V	-	-	10	-	-	10	µA
Fiber coupled optical power *	Po	I_F=20 mA	8	-	-	-	-	-	µW
Radiant flux	ϕe	I_F=20 mA	-	-	-	1.4	-	-	mW
Terminal capacitance	Ct	V_R=0 V, f=1 MHz	-	30	-	-	20	-	pF
Rise time	tr	I_F=20 mA	-	-	300	-	-	-	ns
Fall time	tf	I_F=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



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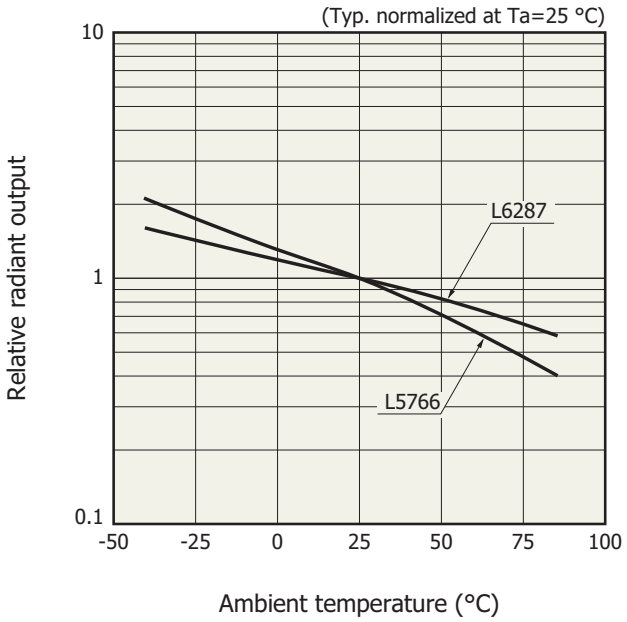
Radiant output vs. ambient temperature



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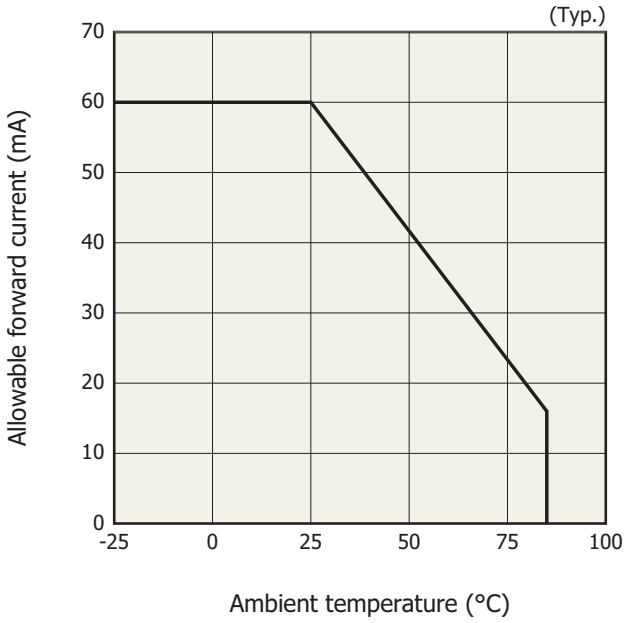
Allowable forward current vs. ambient temperature



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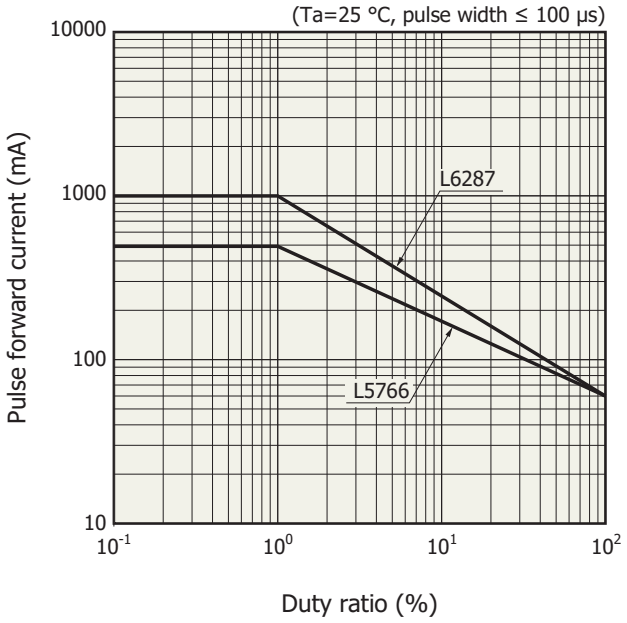
Pulse forward current vs. duty ratio



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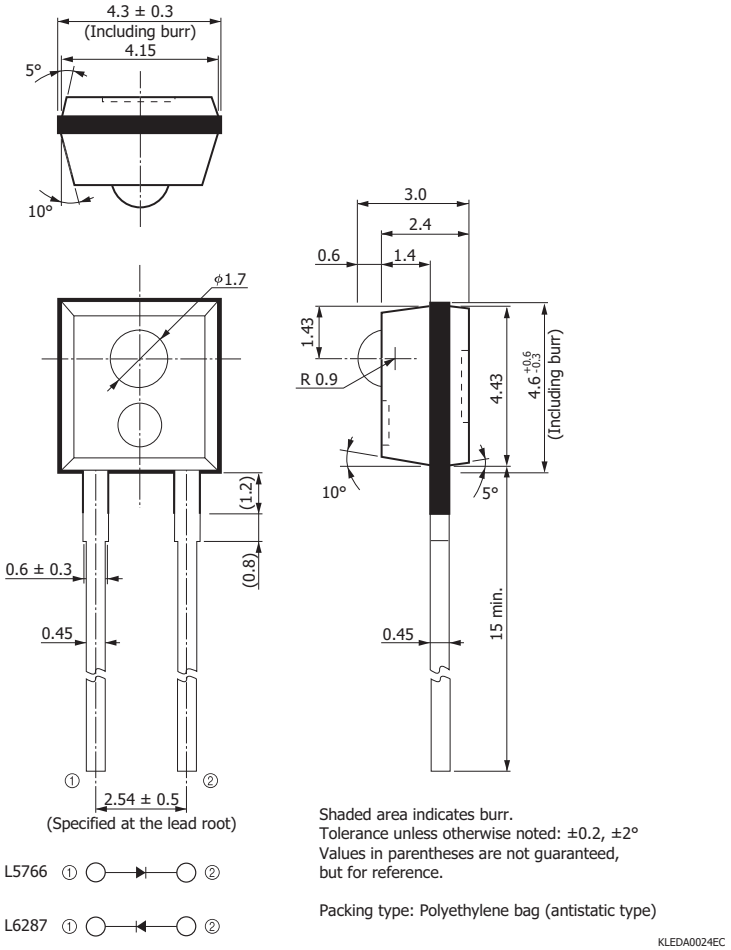
Dimensional outline (unit: mm)



Shaded area indicates burr.
Tolerance unless otherwise noted: ±0.2, ±2°
Values in parentheses are not guaranteed, but for reference.

Packing type: Polyethylene bag (antistatic type)

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Recommended soldering conditions

Parameter	Specification	Remarks
Solder temperature	260 °C max. (3 s)	at least 2.5 mm away from package surface

Note: When setting the soldering conditions, check for any problems by testing out the soldering methods in advance.

Related information

www.hamamatsu.com/sp/ssd/doc_en.html

■ Precautions
· Disclaimer
· Metal, ceramic, plastic packages

■ Technical information
· LED

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