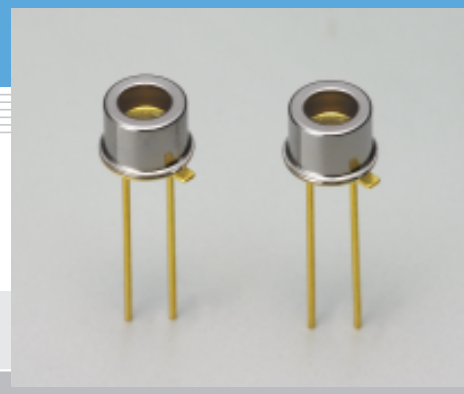


Infrared LED

L7866

Peak emission wavelength: 1.3 μm



L7866 is a long wavelength LED using an InGaAs chip. Peak emission occurs at 1.3 μm , making L7866 ideal for reference light sources when detecting water content or moisture.

Features

- Peak emission wavelength: 1.3 μm
- High radiant output power

Applications

- Reference light source for moisture meter
- Light source for photosensitive material

■ Absolute maximum ratings (Ta=25 °C, unless otherwise noted)

Parameter	Symbol	Condition	Value	Unit
Reverse voltage	V _R		1	V
Forward current	I _F		80	mA
Forward current derating rate	-	T _a > 25 °C	1.1	mA/°C
Pulse forward current	I _{FP}	Pulse width=10 μs Duty ratio=1 %	1.0	A
Pulse forward current derating rate	-	T _a > 25 °C	13	mA/°C
Power dissipation	P		150	mW
Operating temperature	T _{opr}		-30 to +85	°C
Storage temperature	T _{stg}		-40 to +100 *1	°C

*1: L7866 is guaranteed to resist temperature cycle test of up to 5 cycles.

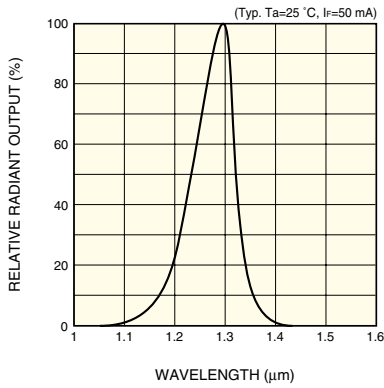
■ Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak emission wavelength	λ_p	I _F =50 mA	1.25	1.3	1.35	μm
Spectral half width (FWHM)	$\Delta\lambda$	I _F =50 mA	-	100	150	nm
Radiant flux	ϕ_e	I _F =50 mA	0.7	1.0	-	mW
Forward voltage	V _F	I _F =50 mA	-	1.0	1.5	V
Pulse forward voltage	V _{FP}	I _F =1 A	-	2	3	V
Reverse current	I _R	V _R =1 V	-	-	10	μA
Cut-off frequency *2	f _c	I _F =50 mA \pm 10 mAp-p	1	3	-	MHz

*2: Frequency at which the light output drops by -3 dB based on light output at 100 kHz.

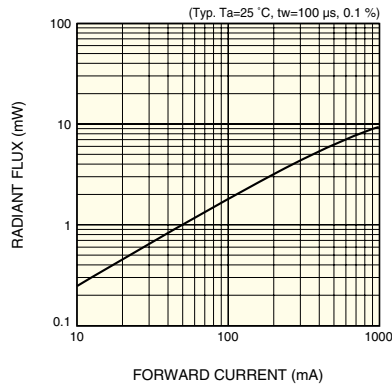
L7866 may be damaged or performance may deteriorate due to static electricity, so use caution when handling.

■ Emission spectrum



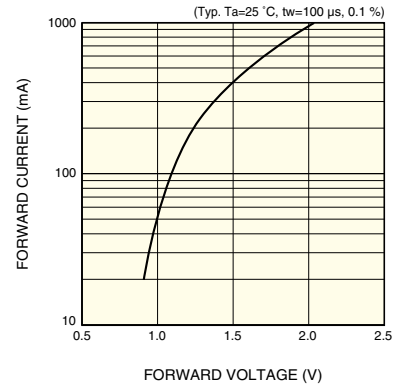
KLEDB0239EA

■ Radiant flux vs. forward current



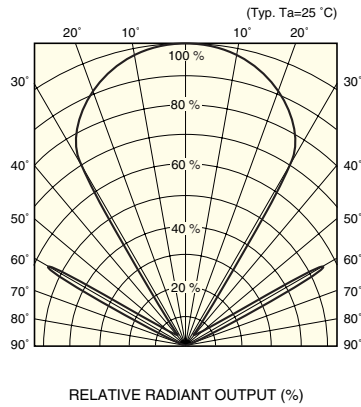
KLEDB0234EA

■ Forward current vs. forward voltage



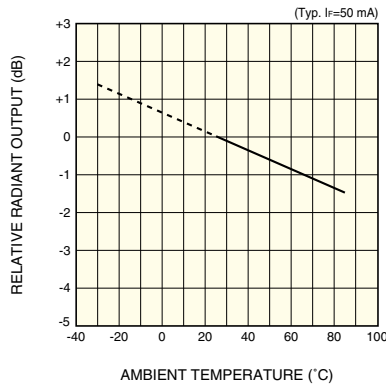
KLEDB0235EA

■ Directivity



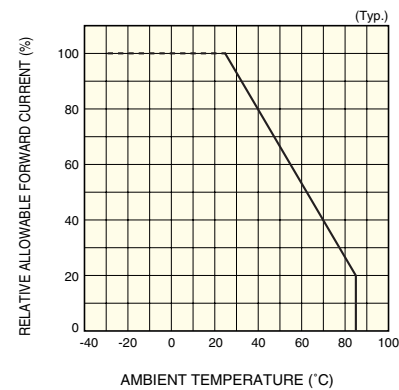
KLEDB0240EA

■ Radiant output vs. ambient temperature



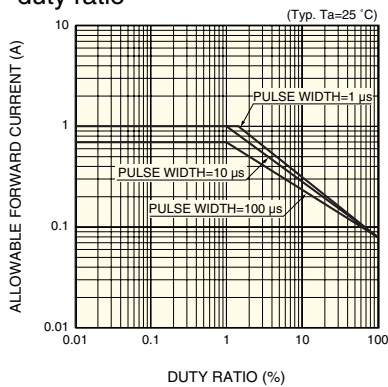
KLEDB0241EB

■ Allowable forward current vs. ambient temperature



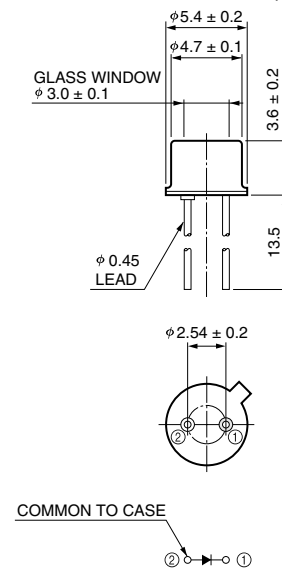
KLEDB0027EB

■ Allowable forward current vs. duty ratio



KLEDB0225EA

■ Dimensional outline (unit: mm)



KLEDA0071EB

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