

INFRARED LED

L7866, L7850

Infrared LED optimized for longer wavelengths



FEATURES

- Peak emission wavelength
L7866: 1.3 μm , L7850: 1.45 μm
- High output power

APPLICATIONS

- Light source for water content analyzer
- Light source for photosensitive material

The L7866 and the L7850 are InGaAs infrared LED optimized for longer wavelengths. The L7866 emits infrared light with a peak wavelength of 1.3 μm . The L7850 provides an even longer peak wavelength at 1.45 μm that is ideal for water content detection. Other wavelength options such as 1.1 to 1.65 μm should be consulted with our sales office.

■ MAXIMUM RATINGS (Ta=25 °C)

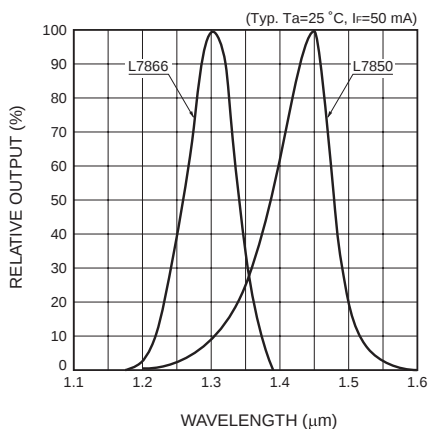
Parameter	Symbol	Conditions	Value	Unit
Reverse Voltage	V _R Max		1	V
Forward Current	I _F		80	mA
Forward Current Deration	-	Ta > 25 °C	1.1	mA/°C
Pulse Forward Current	I _{FP}	Pulse width: 10 μs Duty ratio: 1 %	1.0	A
Pulse Forward Current Deration	-	Ta > 25 °C	13	mA/°C
Power Dissipation	P		150	mW
Operating Temperature	T _{opr}		-30 to +85	°C
Storage Temperature	T _{stg}		-40 to +100	°C

■ ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25 °C)

Parameter	Symbol	Conditions	L7866			L7850			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Peak Emission Wavelength	λ_p	I _F =50 mA	1250	1300	1350	1400	1450	1500	nm
Spectral Width (FWHM)	$\Delta\lambda$	I _F =50 mA	-	100	-	-	100	-	nm
Radiant Flux	ϕ_e	I _F =50 mA	0.7	1.0	-	0.7	1.0	-	mW
Forward Voltage	V _F	I _F =50 mA	-	1.0	1.5	-	1.0	1.5	V
Reverse Current	I _R	V _R =1 V	-	-	10	-	-	10	μA
Cut-off Frequency *1	f _c	I _F =50 mA $\pm$ 10 mA p-p	1	3	-	1	3	-	MHz

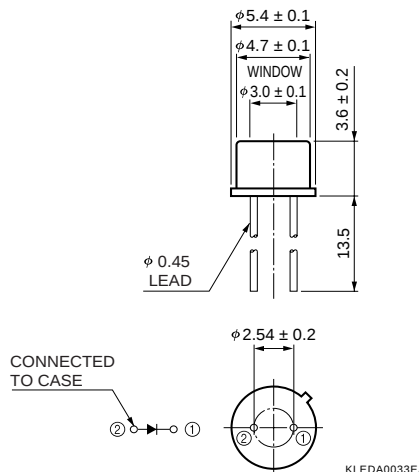
*1: Frequency at which the light output decreases by 3 dB from the output level at 100 kHz.

■ EMISSION SPECTRUM



KLED0087EA

■ DIMENSIONAL OUTLINE (Unit: mm)



KLEDA0033EA