

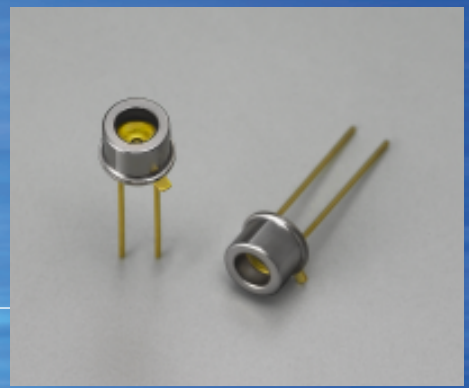
NEW

LED

Infrared LED

L8245

Peak emission wavelength: 1.65 μm



L8245 is a long-wavelength infrared LED using an InGaAs chip. The peak emission occurs at a wavelength near the methane gas absorption band, making L8245 ideal for a light source for methane gas detection.

Features

- Peak emission wavelength: 1.65 μm
- High radiant output

Applications

- Light source for methane gas detection

■ Absolute maximum ratings ($T_a=25\text{ }^\circ\text{C}$, unless otherwise noted)

Parameter	Symbol	Condition	Value	Unit
Reverse voltage	V_R Max.		1	V
Forward current	I_F		80	mA
Forward current decrease rate	-		1.1	mA/ $^\circ\text{C}$
Pulse forward current	I_{FP}	Pulse width=10 μs Duty ratio=1 %	1.0	A
Pulse forward current decrease rate	-		13	mA/ $^\circ\text{C}$
Power dissipation	P		150	mW
Operating temperature	T_{opr}		-30 to +85	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to +100 ^{*1}	$^\circ\text{C}$

*1: Guaranteed to resist temperature cycle test of up to 5 cycles.

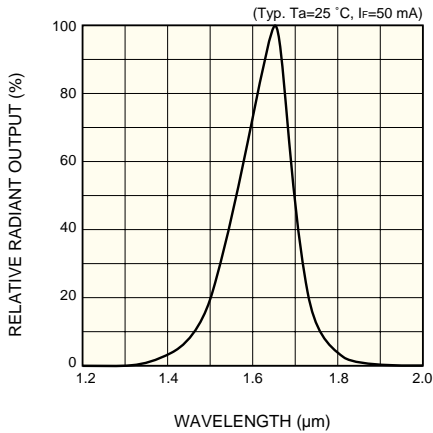
■ Electrical and optical characteristics ($T_a=25\text{ }^\circ\text{C}$)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak emission wavelength	λ_p	$I_F=50\text{ mA}$	1.6	1.65	1.7	μm
Spectral half width	$\Delta\lambda$	$I_F=50\text{ mA}$	-	130	-	nm
Radiant flux	ϕ_e	$I_F=50\text{ mA}$	0.5	0.8	-	mW
Forward voltage	V_F	$I_F=50\text{ mA}$	-	1.0	1.5	V
Reverse current	I_R	$V_R=1\text{ V}$	-	-	10	μA
Cut-off frequency	f_c	$I_F=50\text{ mA}\pm 10\text{ mAp-p}$, ^{*2}	1	3	-	MHz

*2: Frequency at which the optical output decreases by -3 dB versus a reference output level at 100 kHz.

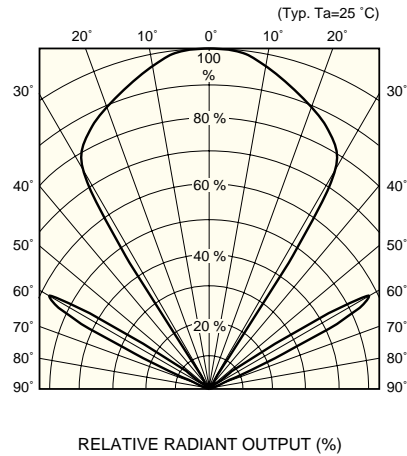
L8245 may be damaged or performance may deteriorate due to static electricity, so use caution when handling.

Emission spectrum



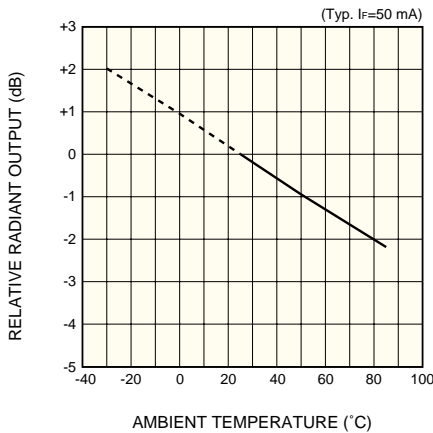
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Directivity



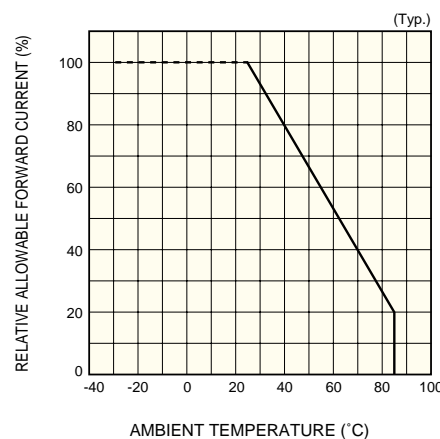
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Radiant output vs. ambient temperature



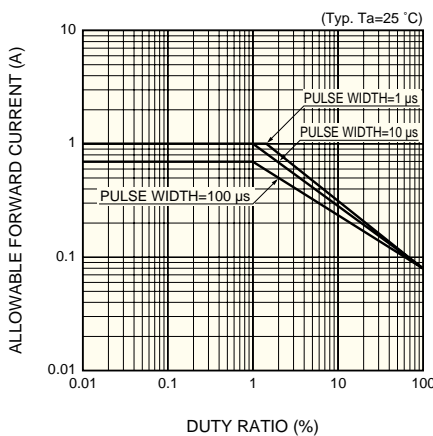
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Allowable forward current vs. ambient temperature



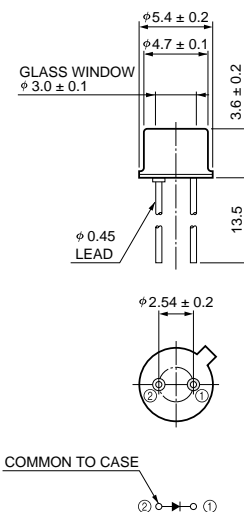
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Allowable forward current vs. duty ratio



KLEDB0225EA

Dimensional outline (unit: mm)



KLEDA0071EA

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