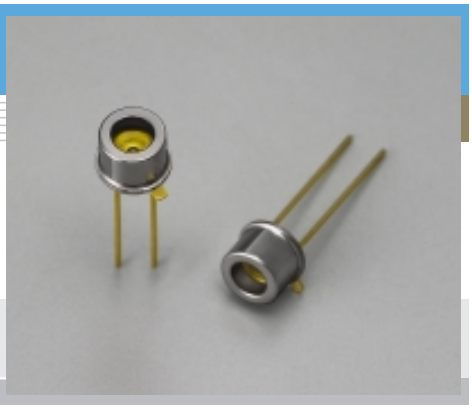
Infrared LED
L8245

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 (Ta=25 °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/°C
Pulse forward current	I_{FP}	Pulse width=10 µs Duty ratio=1 %	1.0	A
Pulse forward current decrease rate	-		13	mA/°C
Power dissipation	P		150	mW
Operating temperature	Topr		-30 to +85	°C
Storage temperature	Tstg		-40 to +100 *1	°C

*1: 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	λp	I_F=50 mA	1.6	1.65	1.7	µm
Spectral half width	Δλ	I_F=50 mA	-	130	-	nm
Radiant flux	φe	I_F=50 mA	0.5	0.8	-	mW
Forward voltage	V_F	I_F=50 mA	-	1.0	1.5	V
Reverse current	I_R	V_R=1 V	-	-	10	µA
Cut-off frequency	fc	I_F=50 mA±10 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.

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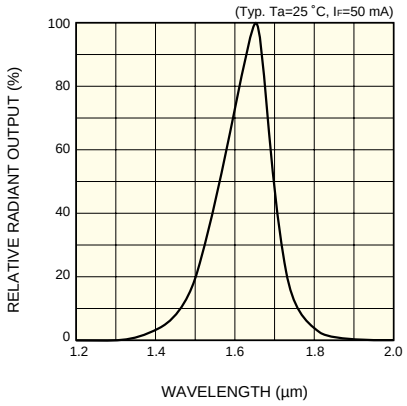
■ Emission spectrum



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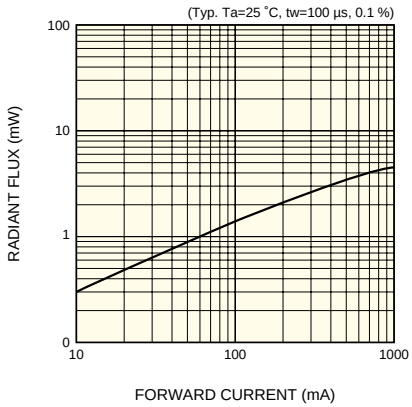
■ Radiant flux vs. forward current



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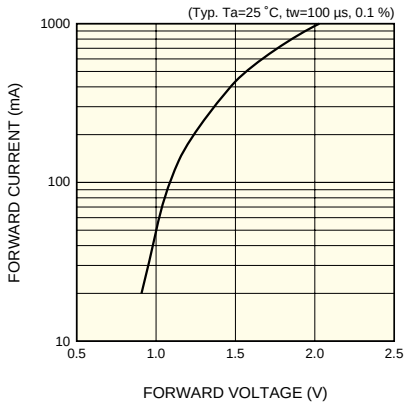
■ Forward current vs. forward voltage



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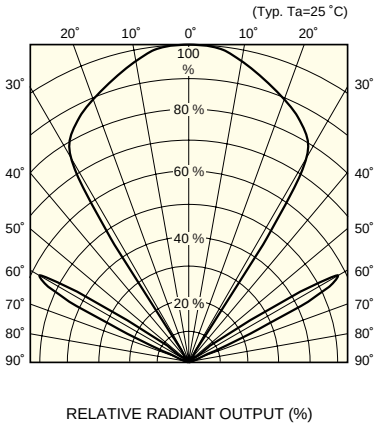
■ Directivity



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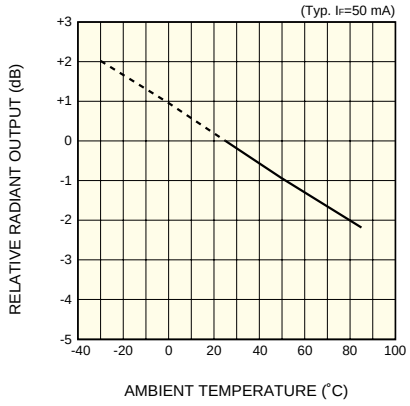
■ Radiant output vs. ambient temperature



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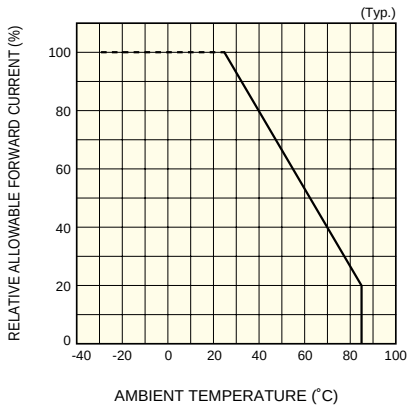
■ Allowable forward current vs. ambient temperature



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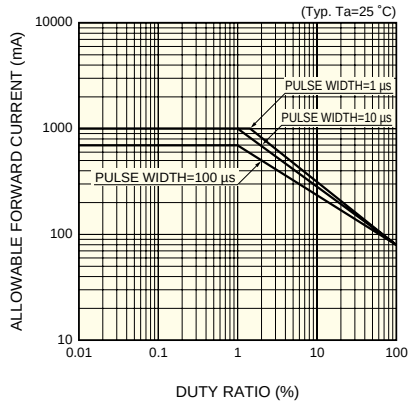
■ Allowable forward current vs. duty ratio



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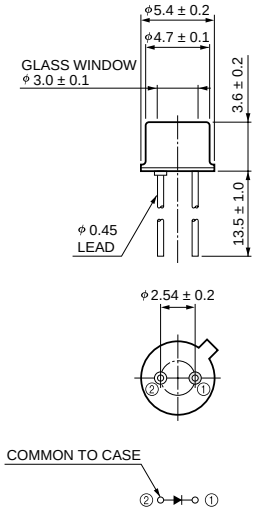
■ Dimensional outline (unit: mm)



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