

# Infrared LED

## L2204/L2402/L3458 series

4-pin plastic package, infrared LED



### Features

- High radiant output power
- High reliability
- Long life

### Applications

- Optical switches
- Automatic control systems

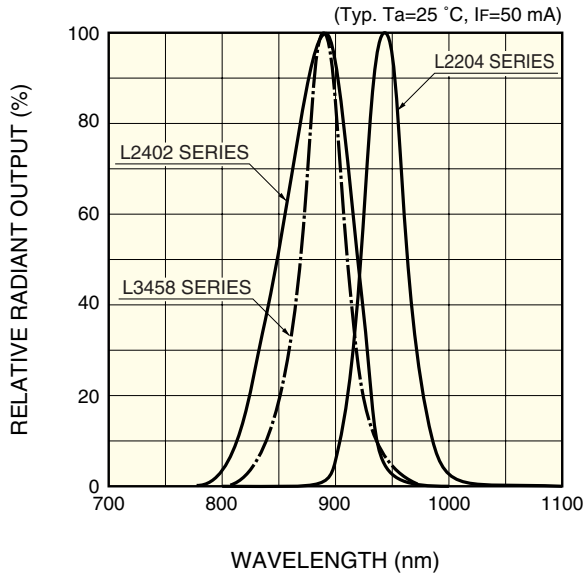
#### ■ Absolute maximum ratings (Ta=25 °C)

Parameter	Symbol	Condition	Value	Unit
Forward current	I <sub>F</sub>		65	mA
Reverse voltage	V <sub>R</sub>		5	V
Pulse forward current	I <sub>FP</sub>	Pulse width=10 μs Duty ratio=1 %	1.0	A
Operating temperature	T <sub>opr</sub>		-25 to +85	°C
Storage temperature	T <sub>stg</sub>		-30 to +100	°C

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

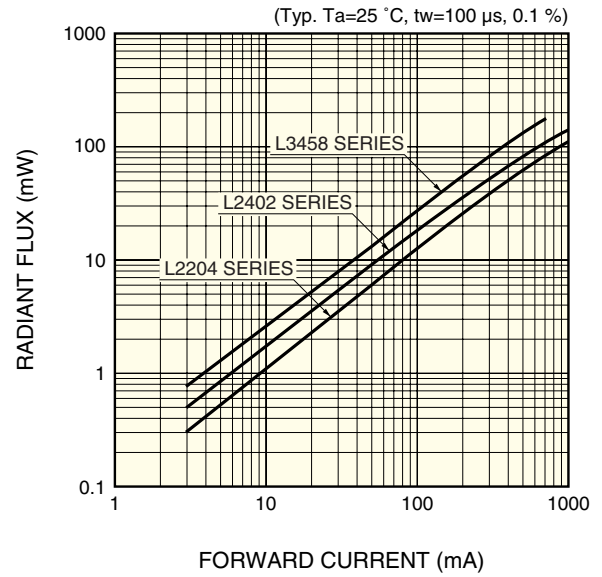
Parameter	Symbol	Condition	L2204/-01/-03			L2402/-01/-02			L3458/-01/-03			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Peak emission wavelength	λ <sub>p</sub>	I <sub>F</sub> =50 mA	920	945	970	870	890	920	870	890	920	nm
Spectral half width	Δλ	I <sub>F</sub> =50 mA	-	45	-	-	80	-	-	50	-	nm
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =50 mA	-	1.30	1.40	-	1.40	1.50	-	1.45	1.60	V
Pulse forward voltage	V <sub>FP</sub>	I <sub>F</sub> =1 A	-	2.3	2.6	-	2.8	3.4	-	3.4	4.0	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =5 V	-	-	5	-	-	5	-	-	5	μA
Radiant flux	φ <sub>e</sub>	I <sub>F</sub> =50 mA	4.0	6.0	-	7.0	9.0	-	9.0	13.0	-	mW
Radiant illuminance	P <sub>E</sub>	I <sub>F</sub> =50 mA	-	0.5	-	-	0.8	-	-	1.0	-	mW/cm <sup>2</sup>
Rise time	t <sub>r</sub>	I <sub>F</sub> =50 mA, 10 to 90 %	-	1.2	2.0	-	0.45	0.7	-	0.45	0.7	μs
Fall time	t <sub>f</sub>	I <sub>F</sub> =50 mA, 90 to 10 %	-	1.3	2.0	-	0.45	0.7	-	0.45	0.7	μs

## ■ Emission spectrum



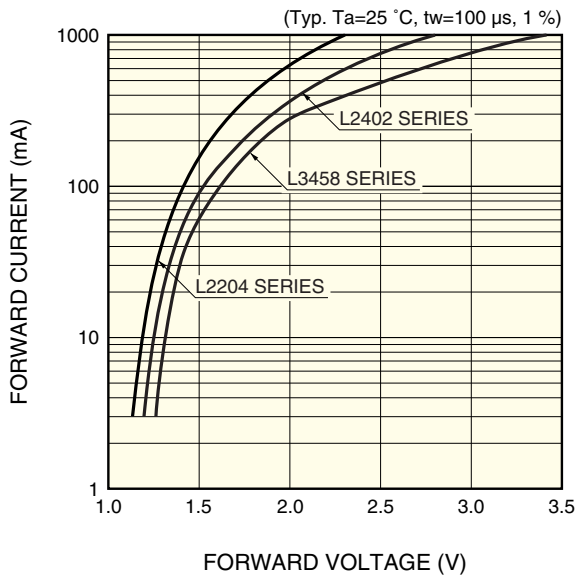
KLEDB0202EA

## ■ Radiant flux vs. forward current



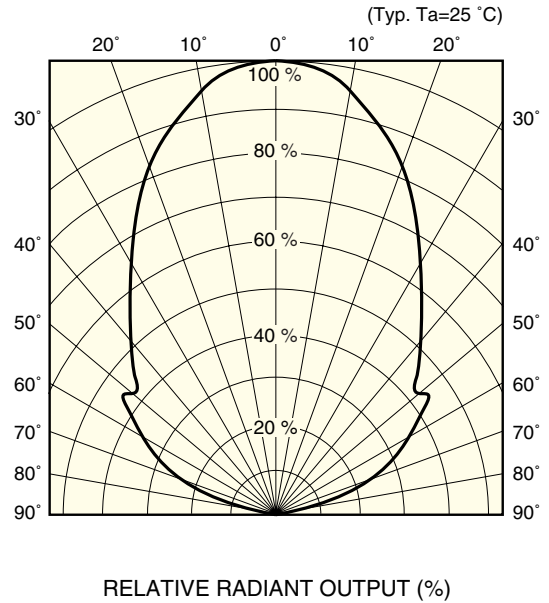
KLEDB0203EA

## ■ Forward current vs. forward voltage



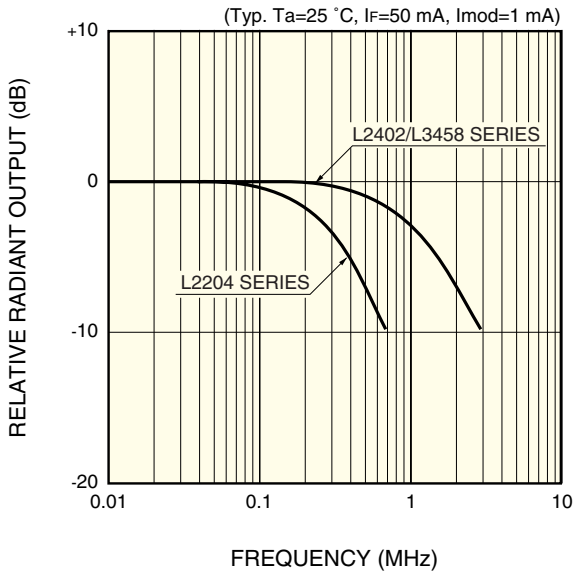
KLEDB0204EA

## ■ Directivity



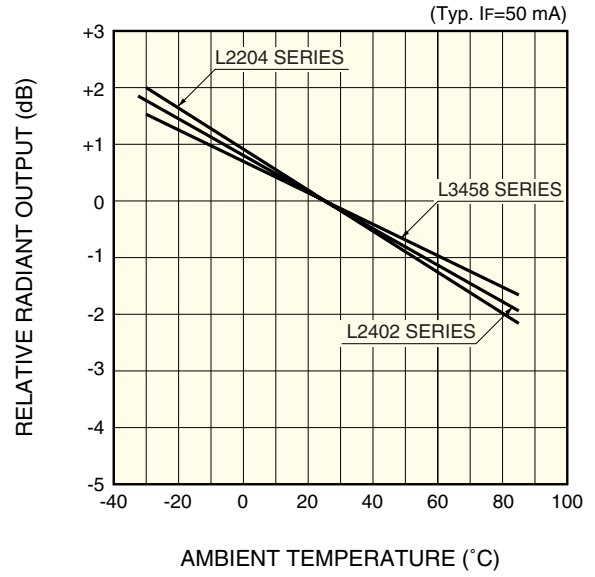
KLEDB0205EA

## Frequency response



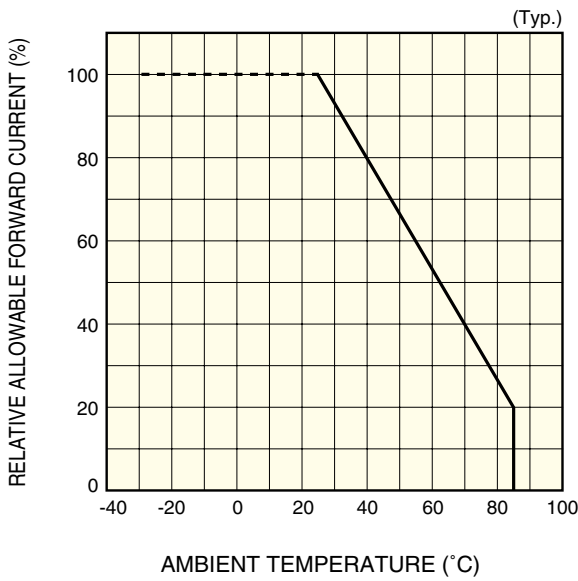
KLEDB0206EA

## Radiant output vs. ambient temperature



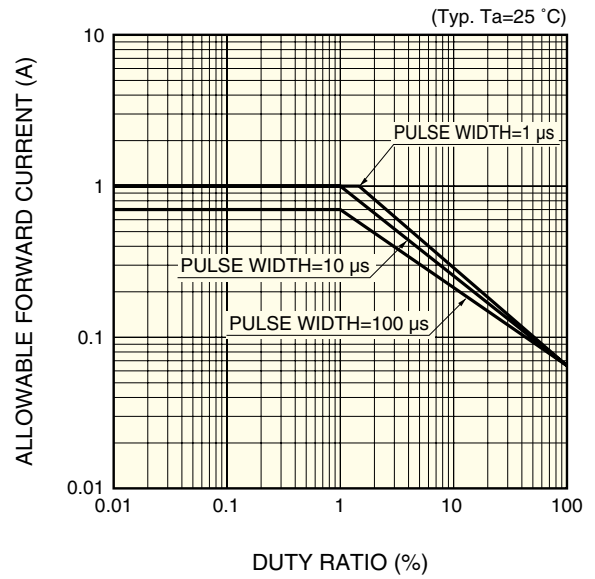
KLEDB0207EA

## Allowable forward current vs. ambient temperature



KLEDB0027EB

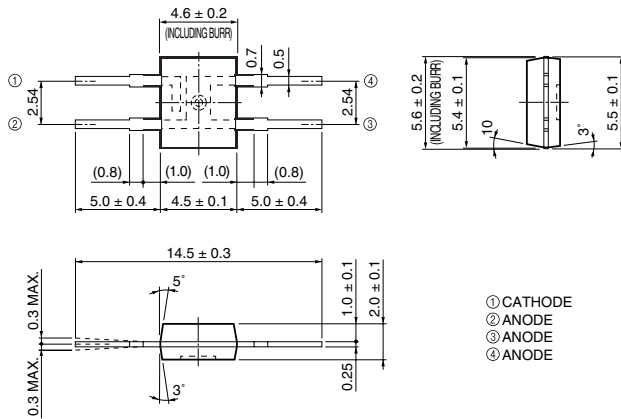
## Allowable forward current vs. duty ratio



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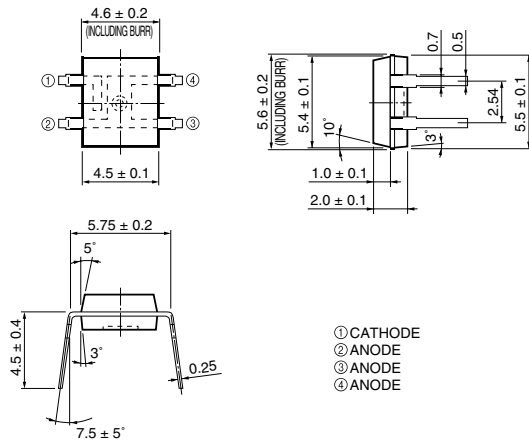
■ Dimensional outlines (unit: mm)

### L2204, L2402, L3458



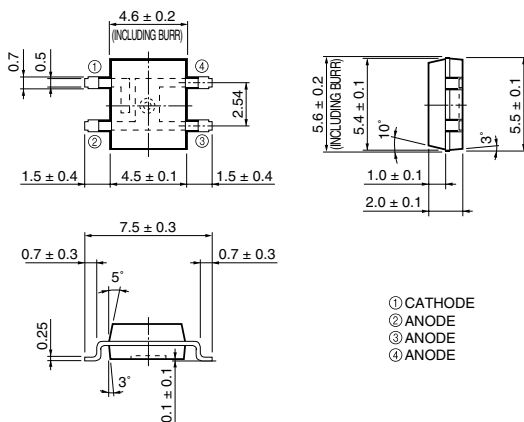
KLEDA0016EB

### L2204-01, L2402-01, L3458-01



KLEDA0017EB

### L2204-03, L2402-02, L3458-03



KLEDA0054EB

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