

# 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)

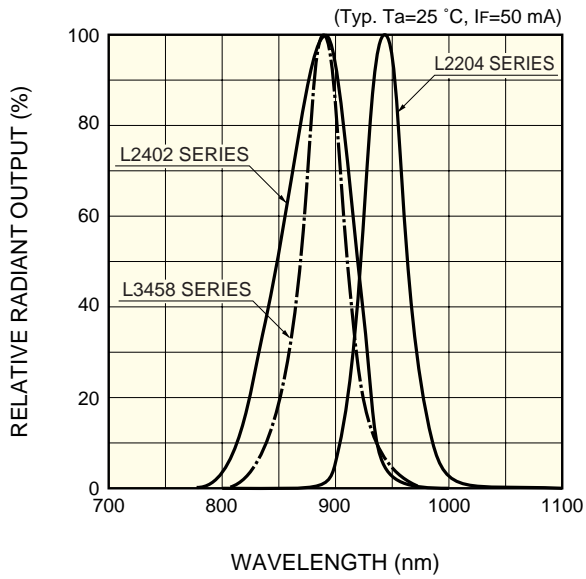
Parameter	Symbol	Condition	Value	Unit
Forward current	IF		65	mA
Reverse voltage	VR		5	V
Pulse forward current	IFP	Pulse width=10 μs Duty ratio=1 %	1.0	A
Operating temperature	Topr		-25 to +85	°C
Storage temperature	Tstg		-30 to +100	°C

#### ■ 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	$\lambda_p$	IF=50 mA	920	945	970	870	890	920	870	890	920	nm
Spectral half width	$\Delta\lambda$	IF=50 mA	-	45	-	-	80	-	-	50	-	nm
Forward voltage	VF	IF=50 mA	-	1.30	1.40	-	1.40	1.50	-	1.40	1.60	V
Pulse forward voltage	VFP	IF=1 A *1	-	2.3	2.6	-	2.8	3.4	-	3.0	3.6	V
Reverse current	IR	VR=5 V	-	-	5	-	-	5	-	-	5	μA
Radiant flux	$\phi_e$	IF=50 mA	4.0	6.0	-	7.0	9.0	-	9.0	13.0	-	mW
Radiant illuminance	PE	IF=50 mA	-	0.5	-	-	0.8	-	-	1.0	-	mW/cm <sup>2</sup>
Rise time	tr	IF=50 mA, 10 to 90 %	-	1.2	2.0	-	0.45	0.7	-	0.45	0.7	μs
Fall time	tf	IF=50 mA, 90 to 10 %	-	1.3	2.0	-	0.45	0.7	-	0.45	0.7	μs

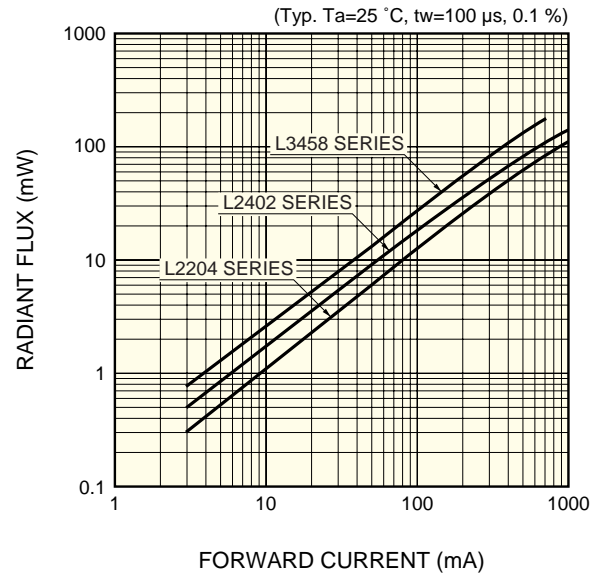
\*1: Pulse width 100 μs, duty ratio 0.1 %

## ■ Emission spectrum



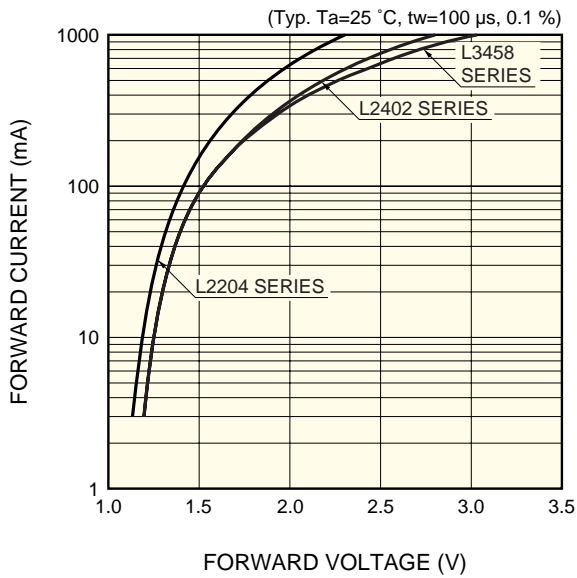
KLEDB0202EA

## ■ Radiant flux vs. forward current



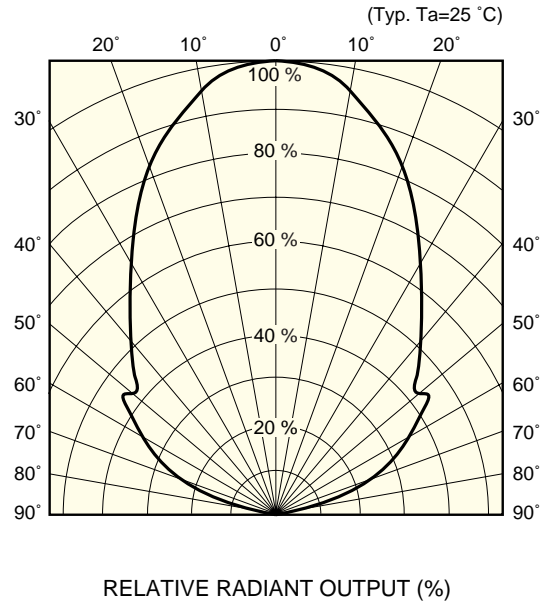
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## ■ Forward current vs. forward voltage



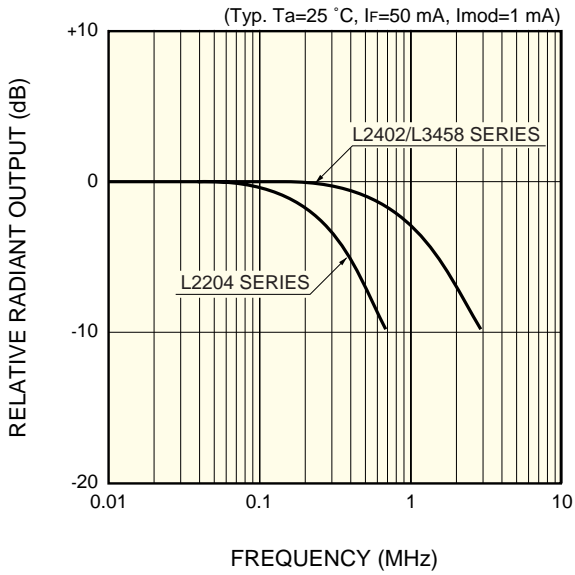
KLEDB0204EB

## ■ Directivity



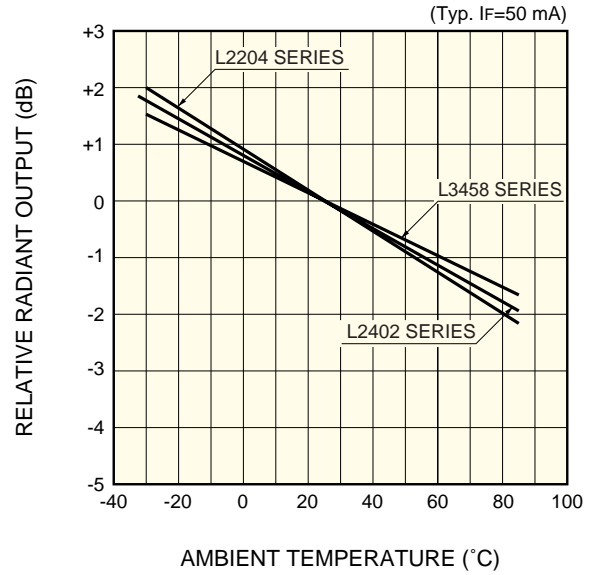
KLEDB0205EA

## Frequency response



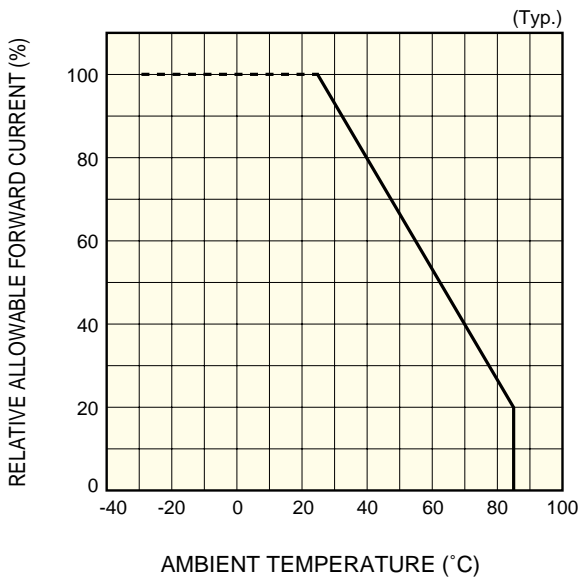
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## Radiant output vs. ambient temperature



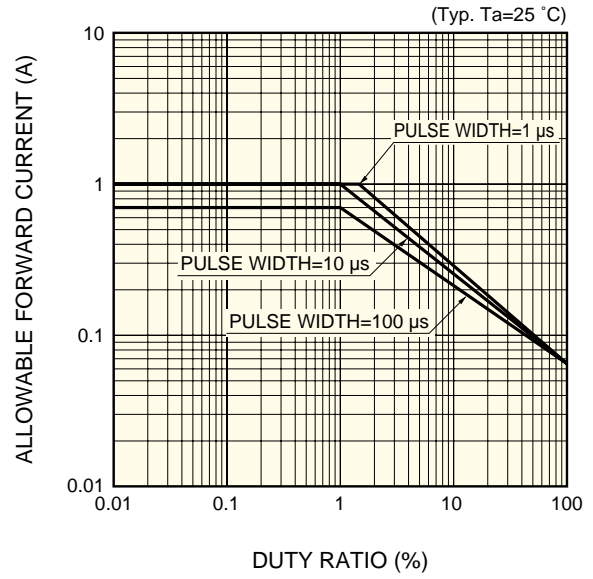
KLEDB0207EA

## Allowable forward current vs. ambient temperature



KLEDB0027EB

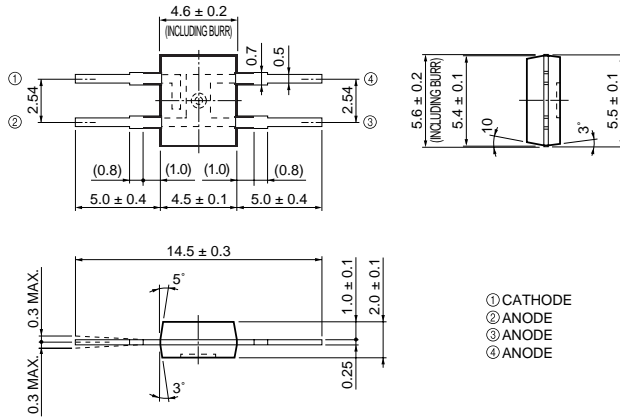
## Allowable forward current vs. duty ratio



KLEDB0208EA

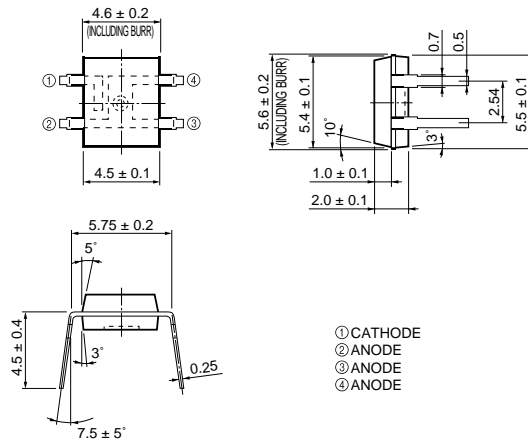
■ Dimensional outlines (unit: mm)

### L2204, L2402, L3458



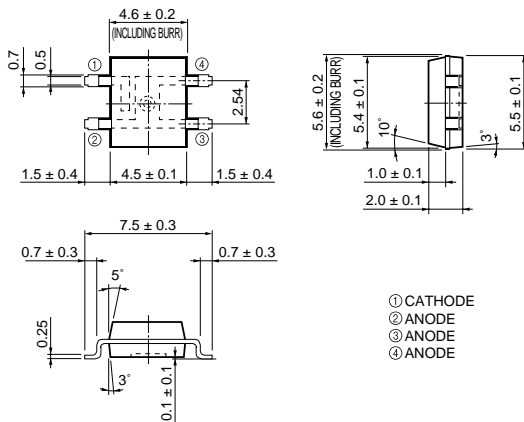
KLEDA0016EB

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



KLEDA0017EB

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



KLEDA0054EB

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