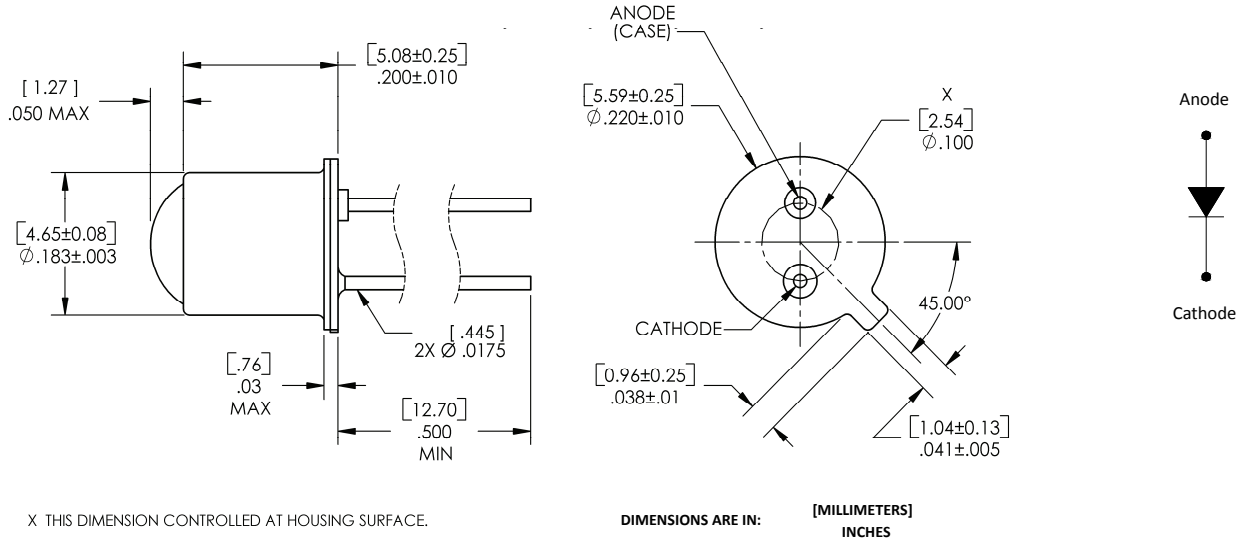
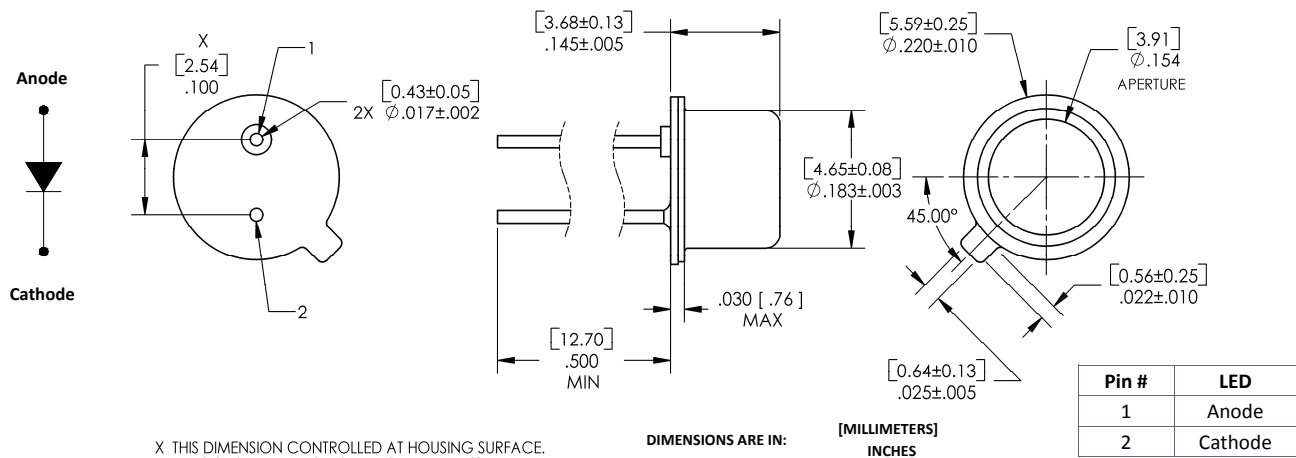


Electrical Specifications



OP231W, OP232W, OP233W, OP234W, OP235W



Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Storage Temperature Range	-65° C to +150° C
Operating Temperature Range	-65° C to +125° C
Reverse Voltage	2.0 V
Continuous Forward Current	100 mA
Peak Forward Current	10.0 A
Lead Soldering Temperature [1/16 inch (1.6 mm) from case for 5 seconds with soldering iron]	260° C ⁽¹⁾
Power Dissipation	200 mW ⁽²⁾

General Note

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Electrical Specifications

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Input Diode						
$E_{E(APTa)}$	Apertured Radiant Incidence					
	OP231	1.5	-	-	mW/ cm ²	OP231 Series $I_F = 100\text{ mA}^{(3)(4)}$ Aperture = 0.250" Distance = 1.429"
	OP232	2.0	-	6.0		
	OP233	3.0	-	-		
	OP234	5.0	-	-		
	OP235	6.0	-	-		
	OP231W	1.5	-	-	mW/ cm ²	OP231W Series $I_F = 100\text{ mA}^{(3)(4)}$ Aperture = 0.250" Distance = 0.466"
	OP232W	3.5	-	7.0		
	OP233W	5.0	-	-		
	OP234W	5.0	-	-		
OP235W	6.0	-	-			
P_O	Radiant Power Output				mW	$I_F = 100\text{ mA}^{(3)}$
	OP231	-	6.0	-		
	OP232 OP233	-	8.0 10.0	-		
V_F	Forward Voltage	-	-	2.0	V	$I_F = 100\text{ mA}^{(3)}$
I_R	Reverse Current	-	-	100	μA	$V_R = 2.0\text{ V}$
λ_P	Wavelength at Peak Emission				nm	$I_F = 10\text{ mA}$
	OP231, OP232, OP233 OP234, OP235	-	890 850	-		
β	Spectral Bandwidth between Half Power Points	-	80	-	nm	$I_F = 10\text{ mA}$
$\Delta\lambda_P/\Delta T$	Spectral Shift with Temperature	-	+0.30	-	nm/ $^\circ\text{C}$	$I_F = \text{Constant}$
θ_{HP}	Emission Angle at Half Power Points				Degree	$I_F = 100\text{ mA}$
	OP231 - OP235 OP231W - OP231W	-	18 50	-		
t_r	Output Rise Time	-	500	-	ns	$I_{F(PK)} = 100\text{ mA}$, $PW = 10\text{ }\mu\text{s}$, and D.C. = 10.0%
t_f	Output Fall Time	-	250	-	ns	

Notes:

1. RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering.
2. Derate linearly 2.0 mW/ $^\circ\text{C}$ above 25 $^\circ\text{C}$.
3. Measurement made with 100 μs pulse measured at the trailing edge of the pulse with a duty cycle of 0.1% and an $I_F = 100\text{ mA}$.
4. For the OP231 series, $E_{E(APTa)}$ is a measurement of the average radiant intensity within the cone formed by the measurement surface, a radius of 1.429" (36.30 mm) measured from the lens side of the tab to the sensing surface and a sensing surface of 0.250" (6.35 mm) in diameter forming a 10 $^\circ$ cone. For the OP231W series, $E_{E(APTa)}$ is a measurement of the average radiant intensity within the cone formed by the measurement surface, a radius of 0.466" (11.84 mm) measured from the lens side of the tab to the sensing surface and a sensing surface of 0.250" (6.35 mm) in diameter forming a 10 $^\circ$ cone. $E_{E(APTa)}$ is not necessarily uniform within the measured area.

General Note

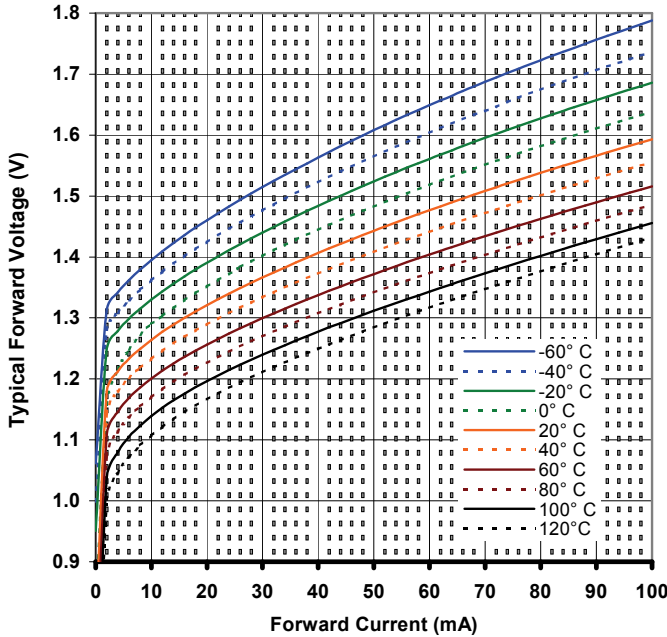
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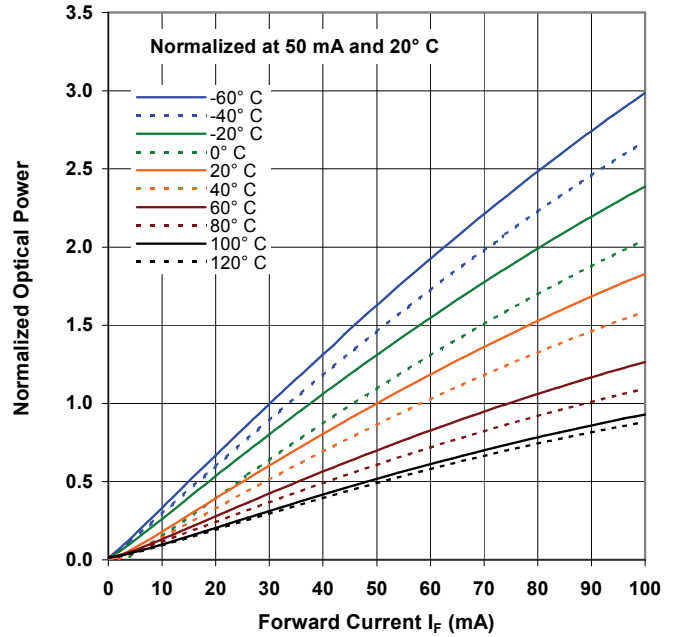
Performance

OP231, OP232, OP233 (including "W" devices)

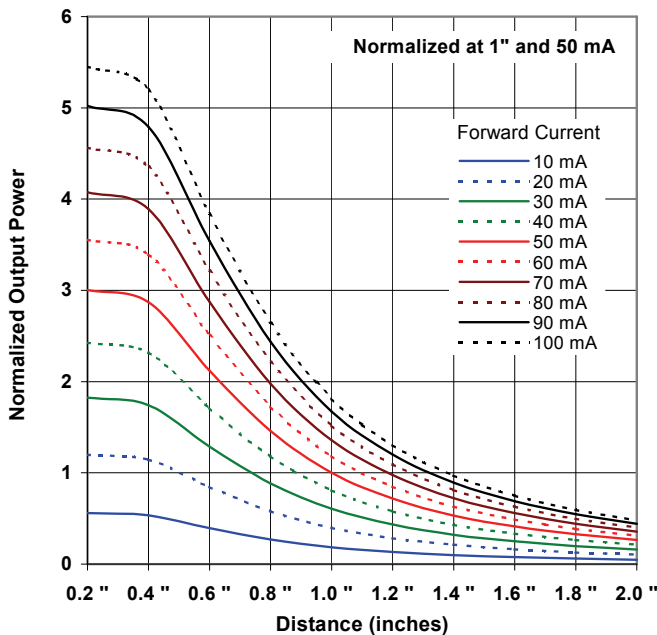
Forward Voltage vs Forward Current vs Temperature



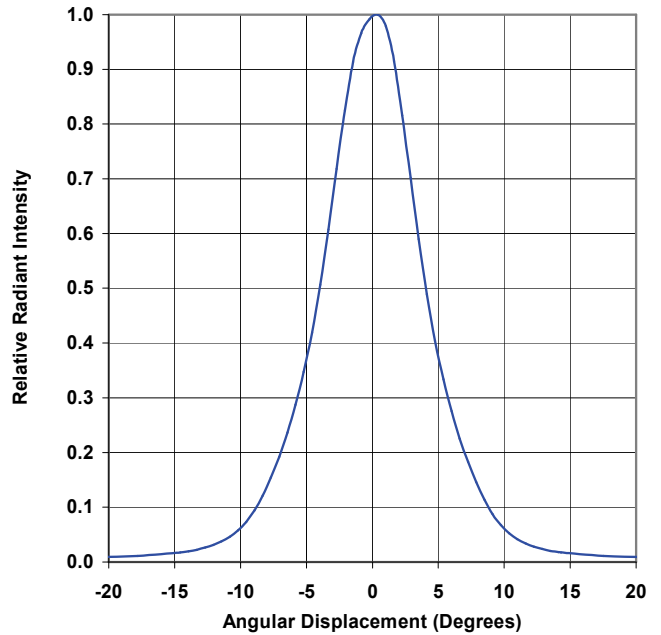
Optical Power vs I_F vs Temperature



Distance vs Output Power vs Forward Current



Relative Radiant Intensity vs. Angular Displacement



General Note

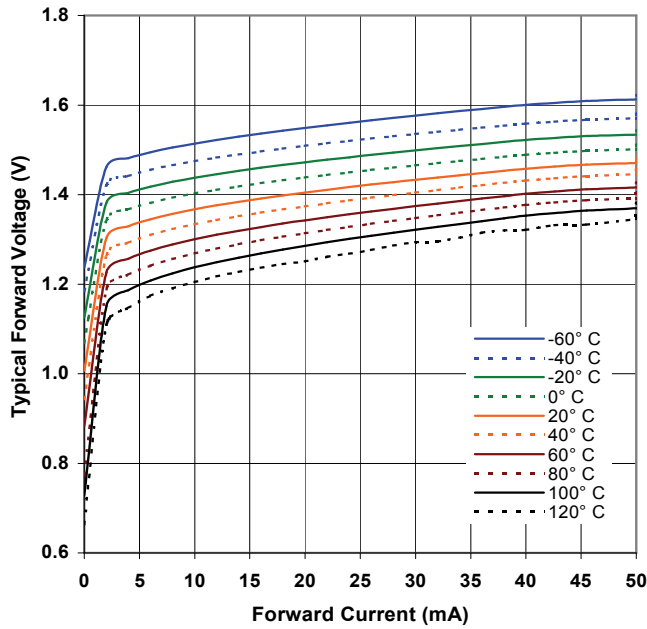
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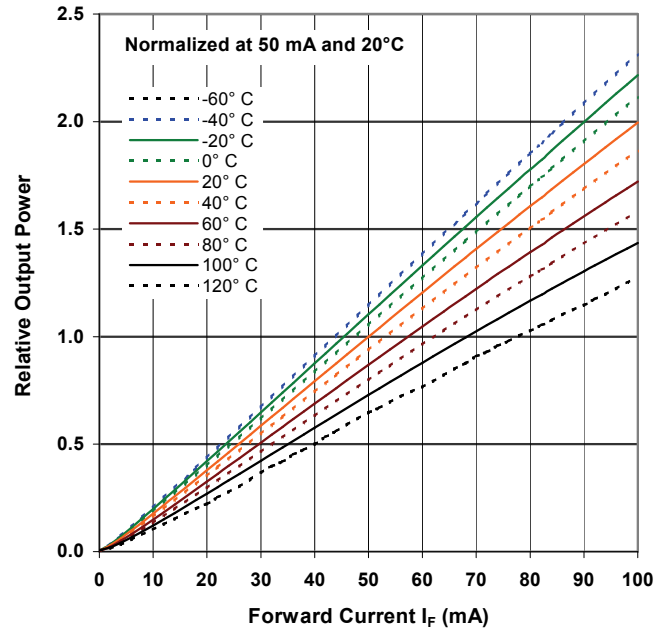
Performance

OP234, OP234W

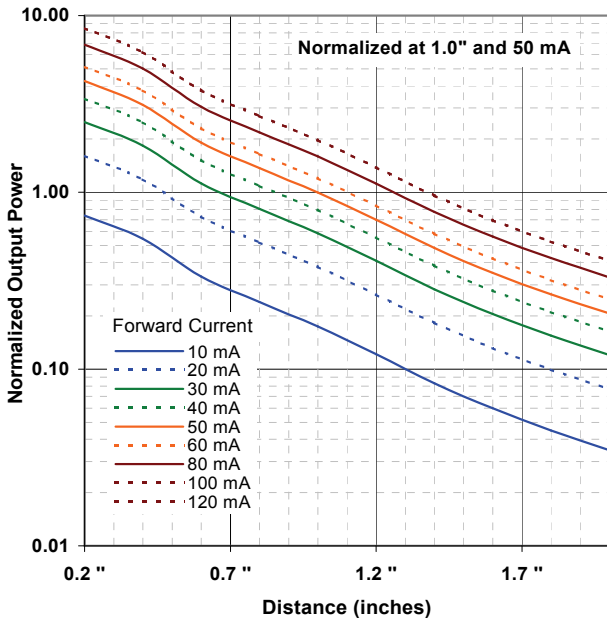
Forward Voltage vs Forward Current vs Temperature



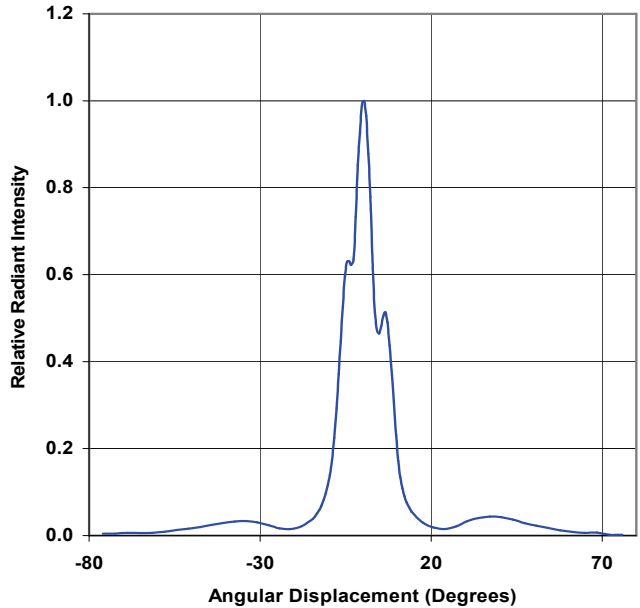
Optical Power vs Forward Current vs Temperature



Distance vs Output Power vs Forward Current



Relative Radiant Intensity vs Angular Displacement



General Note

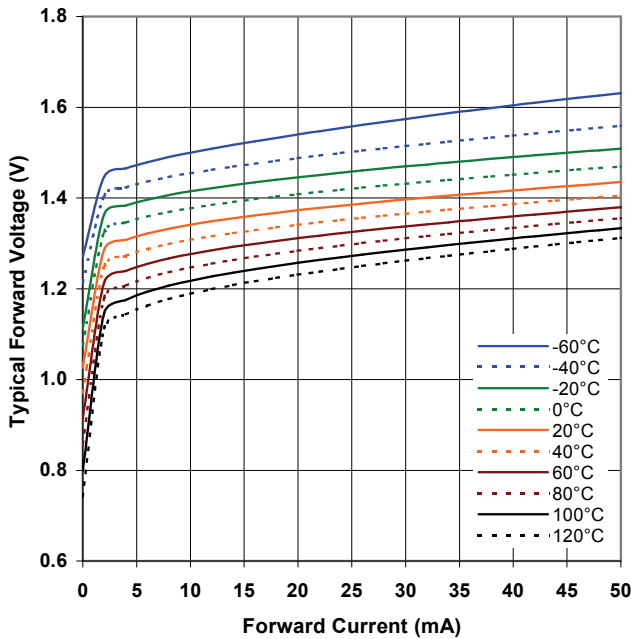
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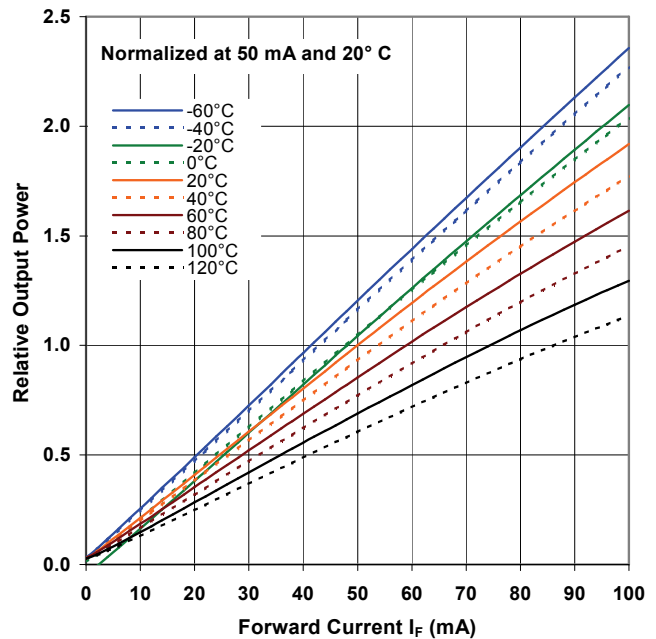
Performance

OP235, OP235W

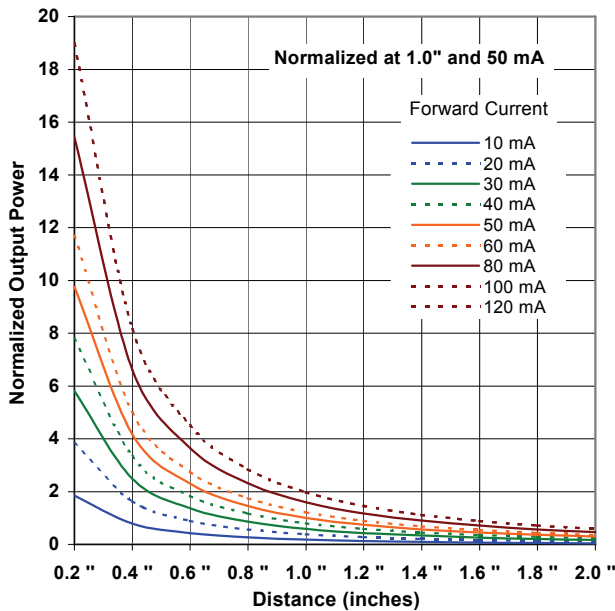
Forward Voltage vs Forward Current vs Temperature



Optical Power vs Forward Current vs Temperature



Distance vs Output Power vs Forward Current



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