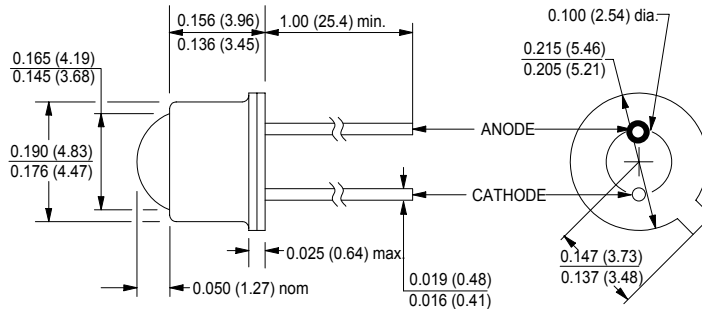
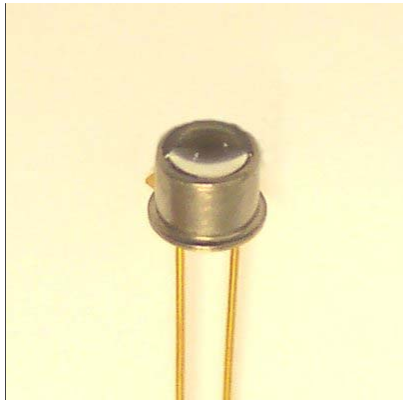


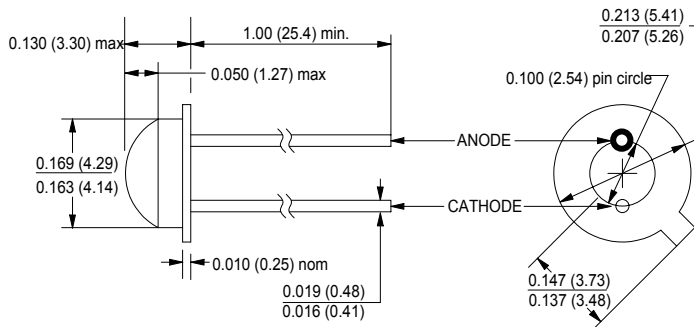
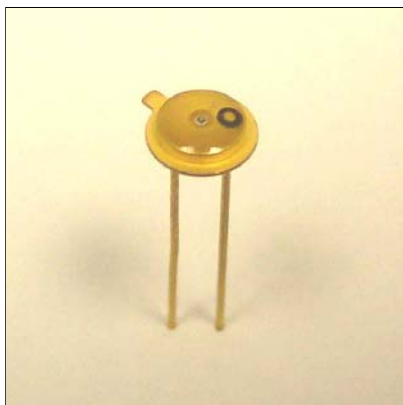


# **MCDE-332 Series**

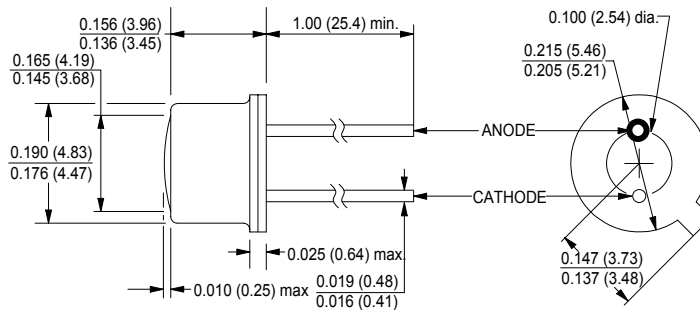
## **850nm Point Source Emitters**



**MCDE332**



**MCDE332E**



ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)

**MCDE332W**

# MCDE-332 Series

## 850nm Point Source Emitters

### features

- TO-46 header with three lens options
- cathode connected to case
- high power output
- different package styles provide flexible design options

### Description

The MCDE332 series of products feature AlGaAs, 850nm, point source chips. Three different lens options are offered which satisfy the majority of application requirements.

### absolute maximum ratings ( $T_A = 25^\circ\text{C}$ unless otherwise stated)

storage temperature	MCDE332 and MCDE332W.....	-65°C to +150°C
	MCDE332E.....	-40°C to +125°C
operating temperature	MCDE332 and MCDE332W.....	-65°C to +125°C
	MCDE332E.....	-40°C to +100°C
lead soldering temperature <sup>(1)</sup>		260°C
continuous forward current <sup>(2)</sup>		50mA
peak forward current (1.0ms pulse width, 10% duty cycle).....		1A
reverse voltage.....		5V
continuous power dissipation <sup>(3)</sup>		200mW

### notes:

1. 0.06" (1.5mm) from the header for 5 seconds maximum
2. Derate linearly 0.40mA/°C from 25°C free air temperature to  $T_A = +125^\circ\text{C}$ .
3. Derate linearly 1.60mW/°C from 25°C free air temperature to  $T_A = +125^\circ\text{C}$ .
4. These devices are sensitive to transients. Use series resistors or power supply load resistors when applying power.

electrical characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)						
symbol	parameter	min	typ	max	units	test conditions
<b>MCDE-332 Series</b>						
$V_F$	Forward voltage	-	1.8	2.0	V	$I_F = 50\text{mA}$
$I_R$	Reverse current	-	-	10	$\mu\text{A}$	$V_R = 5\text{V}$
$\lambda_p$	Peak wavelength	840	850	860	nm	$I_F = 50\text{mA}$
BW	Spectral bandwidth	-	40	-	nm	$I_F = 50\text{mA}$
$t_r, t_f$	Output rise and fall time	-	10	-	ns	$I_F = 50\text{mA}$ , 10% - 90% 5mA prebias
<b>MCDE-332</b>						
$P_O$	Total output power	1.5	2.0	-	mW	$I_F = 50\text{mA}$
$E_e$	Irradiance	225	-	-	$\mu\text{W}/\text{cm}^2$	$I_F = 50\text{mA}$
$\theta_{HP}$	Emission angle at half power points	-	15	-	deg.	$I_F = 50\text{mA}$
<b>MCDE-332E</b>						
$P_O$	Total output power	3.5	4.5	-	mW	$I_F = 50\text{mA}$
$\theta_{HP}$	Emission angle at half power points	-	135	-	deg.	$I_F = 50\text{mA}$
<b>MCDE-332W</b>						
$P_O$	Total output power	1.5	2.0	-	mW	$I_F = 50\text{mA}$
$\theta_{HP}$	Emission angle at half power points	-	80	-	deg.	$I_F = 50\text{mA}$

MCD Electronics Inc. reserves the right to make changes at any time to improve design and to provide the best possible product.