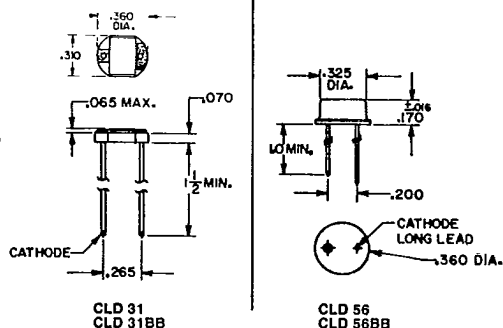


T-41-51

Product Data

CLD31
CLD56
CLD31BB
CLD56BB

Silicon Planar
Photovoltaic Diodes

The anode of "V" versions are identified by a color dot



GENERAL DESCRIPTION — The CLD Series of Photodiodes is specifically designed to optimize Photovoltaic characteristics. They are all Silicon PN Planar diodes, with 2 diodes in hermetic bases for stringent environmental applications and 2 epoxy encapsulated devices for lower cost applications. All diodes offer high linearity, low dark current, and fast response for use in critical measurement applications. These units are also available with a special filter material to block out response to visible light; CLD31V.

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures

Storage Temperature -35°C to $+150^{\circ}\text{C}$ Operating Junction Temperature $+150^{\circ}\text{C}$

Storage, Operating Temperature of Epoxy

Encapsulated Device -30°C to $+85^{\circ}\text{C}$ (5)All dimensions $\pm .005$ except as noted.**ELECTRICAL CHARACTERISTICS (25°C Free Air unless otherwise designated.)**

Symbol	Characteristics	CLD31 Min. Max.		CLD31BB Min. Max.		CLD56 Min. Max.		CLD56BB Min. Max.		Unit
LXW	Active Area	.222 x .122		.222 x .122		.222 x .122		.222 x .122		inches
I_{sc}	Short Circuit Current (1) H = 5mw/cm ²	150		150		100		100		μA
V_{oc}	Open Circuit Voltage (1) H = 5mw/cm ²	.35 Typ.		.35 Typ.		.35 Typ.		.35 Typ.		Volts
I_D	Dark Current V = 100 mv H = 0 V = -15 v		100		—		100		—	nA
C_j	Junction Capacitance (2)		400		400		400		400	pf
t_r, t_f	Rise or Fall time (3)		10		10		10		10	μsec
ΔT_{sc}	Temperature Coefficient I_{sc} (1) (4)	+.2% Typical								%/C°
	Peak Spectral Response	8600 Typ.		8600 Typ.		8600 Typ.		8600 Typ.		Å

(1) Light source is a frosted tungsten incandescent lamp at 2854°K.

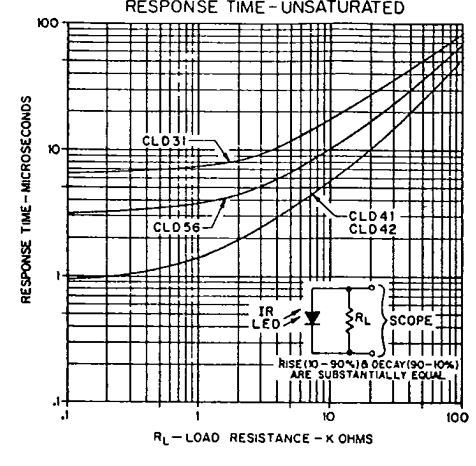
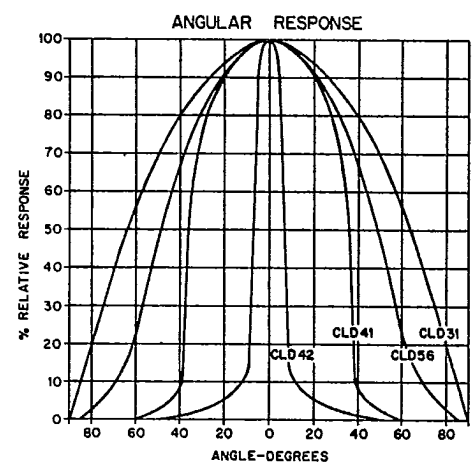
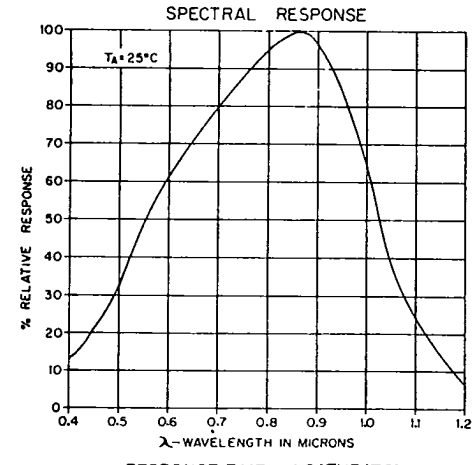
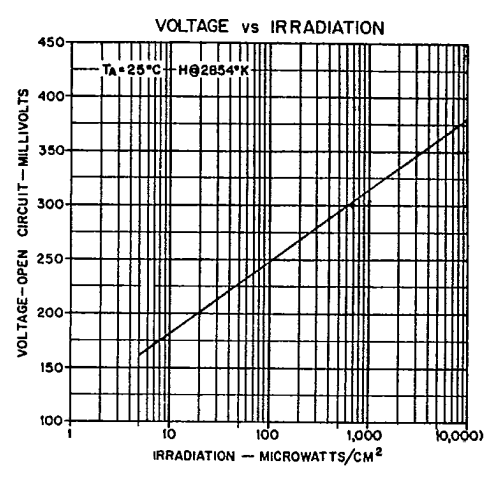
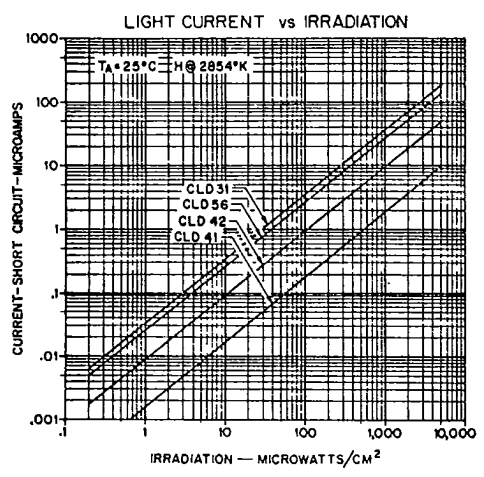
(2) Measured at 0 bias with $f = 1\text{MHz}$.

(3) Measured in an unsaturated condition with an IR source and a load resistor of 1Kohms.

(4) Typical open circuit voltage temperature coefficient is $-2\text{mV}/^{\circ}\text{C}$.

(5) Can supply units rated for 100 C

Consult factory for special I_D selections



PHOTOVOLTAIC DIODE EQUIVALENT CIRCUIT

