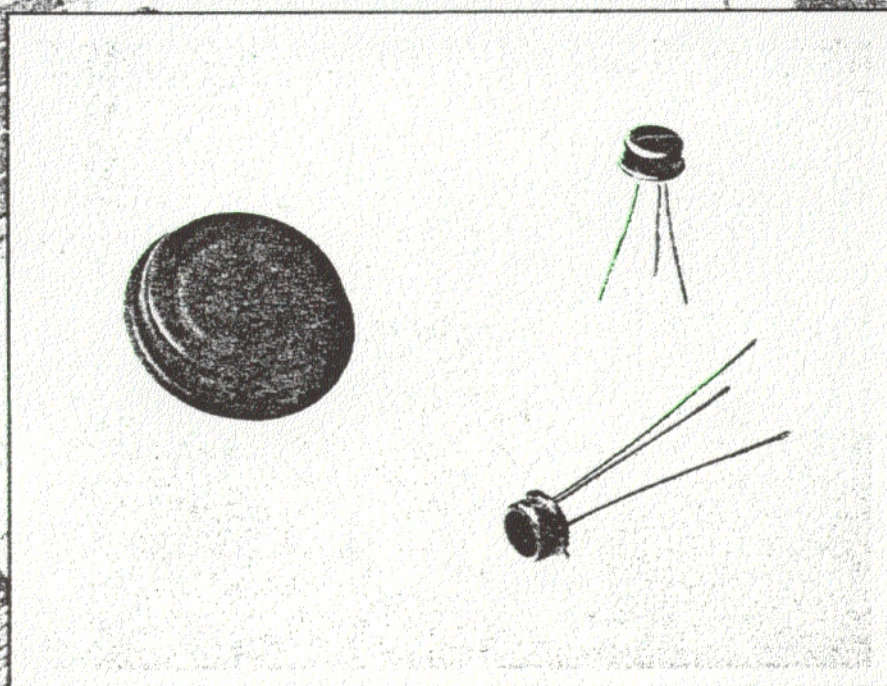


DT Series Silicon Photodiodes



Features

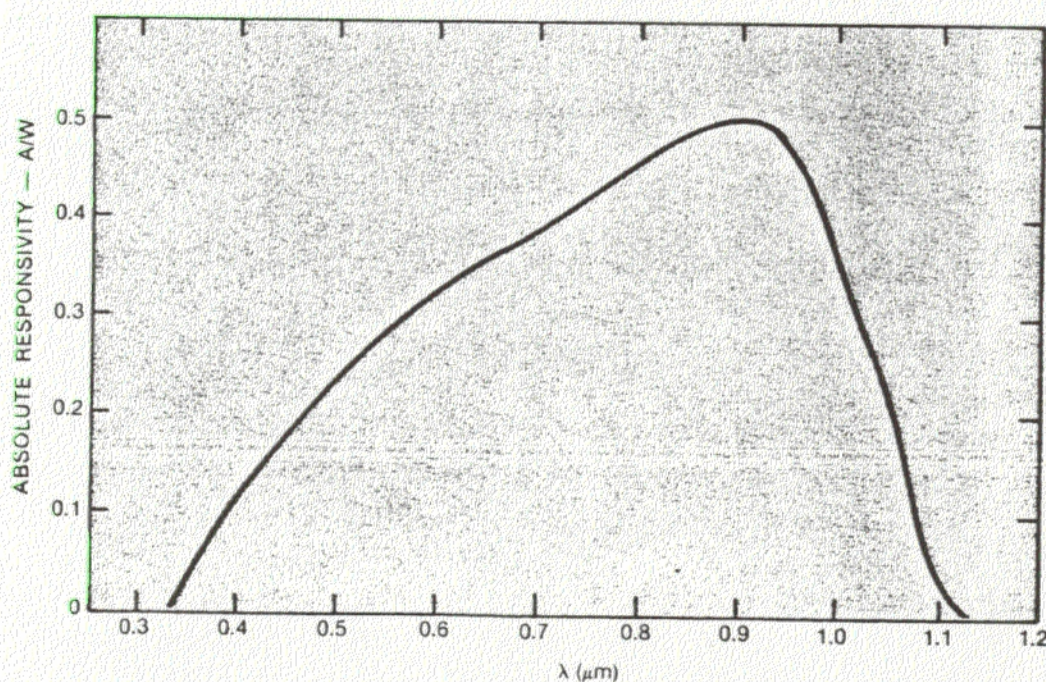
- Low Cost
- Planar Diffused
- Oxide Passivation
- Guard Ring Construction
- Wide Spectral Range
- Low Noise
- Large Area
- Fast Rise Time
- High Responsivity
- Wide Dynamic Range

Electrical Data

Typical Performance Characteristics at 100V Bias

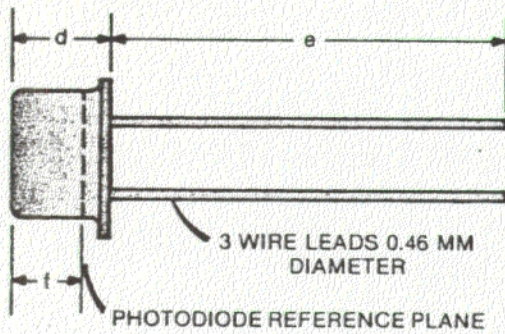
Characteristic	DT-25	DT-110	Conditions or Units
Active Area	5.1	100	sq mm
Wavelength Range	350-1150	350-1150	nanometers
Bandwidth	45	45	MHz at $R_L = 50 \Omega$
Responsivity	>0.50	>0.50	amps/watt at 900 nm
Rise Time	5	10	10^{-9} seconds
Operating Voltage	0-180	0-180	volts
Breakdown Voltage	>200	>200	volts
Capacitance	4	70	10^{-12} farads
Series Resistance	800	50	ohms
Channel Resistance	3	1	10^6 ohms at 25°C
Dark Current	<30	<400	10^{-9} amps at 25°C
Noise Current	1×10^{-13}	4×10^{-13}	amps/ $\sqrt{\text{Hz}}$ at 1 KHz
NEP (0.90, 10 MHz, 1 Hz)	2×10^{-13}	8×10^{-13}	watts/ $\sqrt{\text{Hz}}$
Operating Temperature	-55 to +125	-55 to +125	degrees C
Linearity $\pm 1\%$	7	7	decades
Package Style	TO-5	TO-36	

Spectral Response



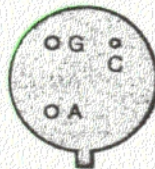
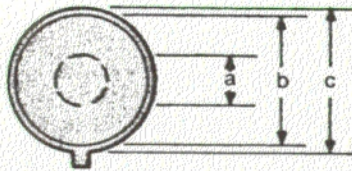
Mechanical Data

DT-25

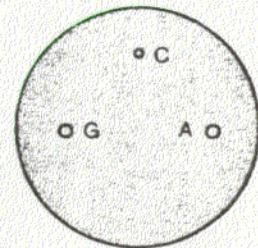
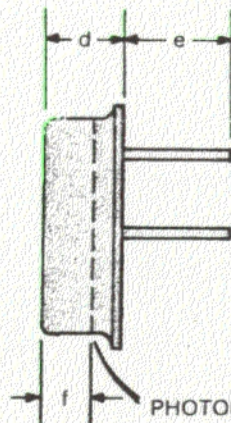
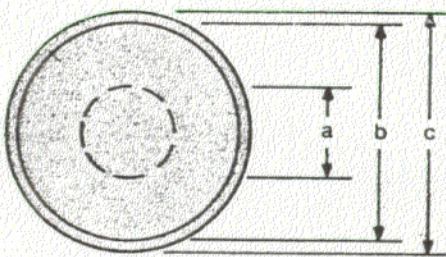


Dimension (mm)	DT-25	DT-110
a (Active Dia.)	2.5	11.3
b	8.4	27.9
c	9.1	31.8
d	4.2	7.1
e	>19.0	12.3
f	2.3	5.7
Pin Circle Radius	2.5	9.5
Window Thickness	1.3	1.6
Window Diameter	6.1	1.0

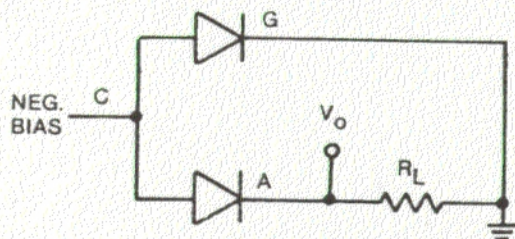
Gold plated kovar leads and base window — Corning 7052 glass.



DT-110



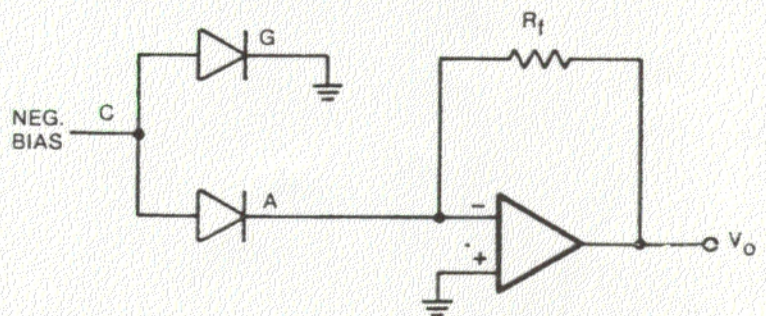
Basic Operating Circuit



V_O = Output Volts
 I_p = Photocurrent
 R_L = Load Resistor

A = Active Area Cathode
 G = Guard Ring Cathode
 C = Common Anode

Photodiode/OP Amp Circuit



$V_O = I_p R_f$ = Output Volts
 I_p = Photocurrent
 R_f = Feedback Resistor