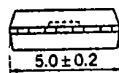
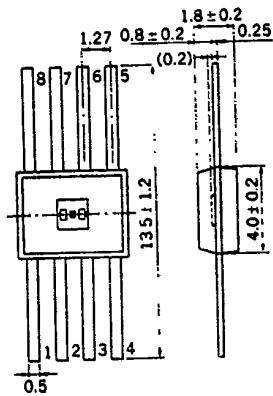


T-41-53

# PHOTO DIODE PH312

## SILICON EPITAXIAL PLANAR PIN PHOTO DIODE DETECTOR for DAD, VD

### PACKAGE DIMENSIONS (Unit : mm)



1. Anode E
2. Common Cathode
3. Anode D
4. Anode C
5. Anode F
6. Common Cathode
7. Anode B
8. Anode A

### FEATURES

- Small clear mold package.
- Easy optical alignment because of accurate chip location.
- High Sensitivity.  $S = 0.52 \text{ A/W TYP. @ } \lambda = 780 \text{ nm}$
- High element resistance.

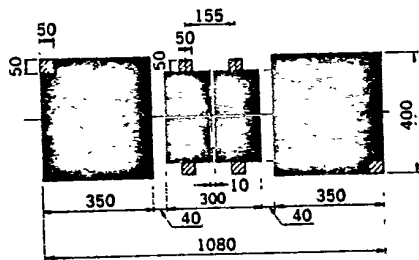
### APPLICATIONS

- Optical head for video and audio disk.
- Optical detector of tracking and focus signal.

### ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

Reverse Voltage	$V_R$	20	V
Reverse Current	$I_R$	10	mA
Forward Current	$I_F$	10	mA
Power Dissipation	P	20	mW
Operating Temperature	$T_{opt}$	-20 to +80	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 to +100	$^\circ\text{C}$

### CHIP PATTERN (Unit : $\mu\text{m}$ )



- Detecting area
- ▨ Bonding pad

PH312

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ELECTRO-OPTICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Dark Current	$I_D$			4	nA	$V_R = 15\text{ V}$
Sensitivity	S	0.40	0.52		A/W	$V_R = 15\text{ V}, \lambda = 780\text{ nm}$
Rise Time	$t_r$		1		ns	$V_R = 15\text{ V}, R_L = 1\text{ k}\Omega$
Fall Time	$t_f$		1		ns	$V_R = 15\text{ V}, R_L = 1\text{ k}\Omega$
Terminal Capacitance	$C_1^*$		2.3		pF	$V_R = 15\text{ V}, f = 1.0\text{ MHz}$
Terminal Capacitance	$C_2^{**}$		6.5		pF	$V_R = 15\text{ V}, f = 1.0\text{ MHz}$
Resistance between Each Element	R	1.0			$M\Omega$	

\* : A to D Each element capacitance against cathode.  
 \*\* : E, F Each element capacitance against cathode.

TYPICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

