

PD414PI High Speed PIN Photodiode for Optical Space Transmission

APPLICATIONS:

- AV equipment
- Personal computers
- Portable information terminal equipment

FEATURES

- High speed response (cut-off frequency: 40 MHz)
- Built-in visible light cut-off filter
(peak sensitivity wavelength: $\lambda_p = \text{TYP. } 960 \text{ nm}$)
- Half intensity angle: $\Delta\theta: \pm 30^\circ$
- Lead bending typing compatible

ABSOLUTE MAXIMUM RATINGS

$T_A = 25^\circ\text{C}$

PARAMETER	SYMBOL	RATING	UNIT
Reverse voltage	V_R	30	V
Operating temperature	T_{OPR}	-25 to +85	$^\circ\text{C}$
Storage temperature	T_{STG}	-40 to +100	$^\circ\text{C}$
Soldering temperature*	T_{SOL}	260	$^\circ\text{C}$

NOTE: *For MAX. 5 seconds at the position of 2.15 mm from resin edge.

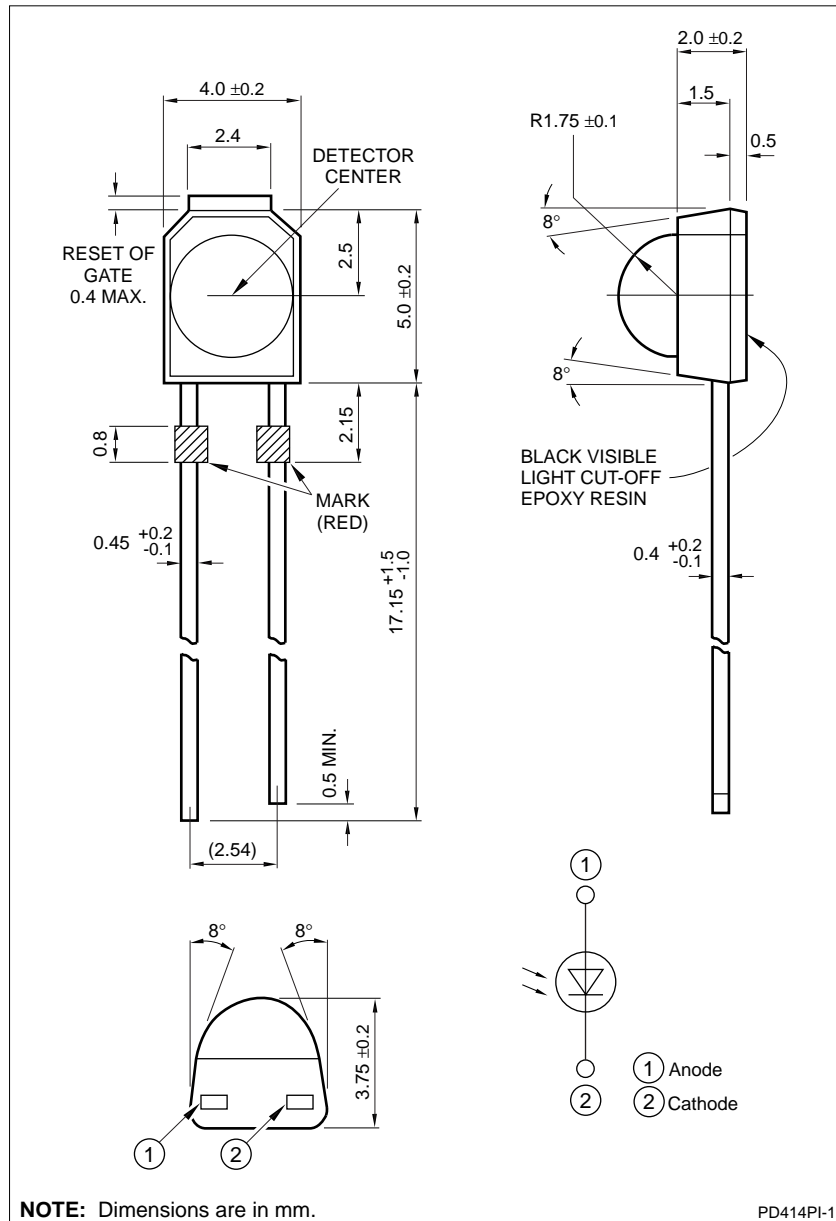
ELECTRO-OPTICAL CHARACTERISTICS

$T_A = 25^\circ\text{C}$

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Shortcircuit current	I_{SC}	$E_V = 100 \text{ lx}^*$	1.3	2.1	3.1	μA
Dark current	I_d	$V_R = 10 \text{ V}, E_e = 0$		0.05	20	nA
Forward voltage	V_F	$I_F = 1 \text{ mA}$			1.0	V
Terminal capacitance	C_t	$V_R = 5 \text{ V}, f = 1 \text{ MHz}$		5.1		pF
Peak sensitivity wavelength	λ_p			960		nm
Cut-off frequency	f_c	$V_R = 5 \text{ V}, R_L = 50 \Omega$		40		MHz
Half intensity angle	$\Delta\theta$			± 30		degree

NOTE: * E_V : Illuminance by CIE standard light source A (tungsten lamp).

OUTLINE DIMENSIONS



SHARP Microelectronics of the Americas Regional Sales Offices

North American Headquarters
 Camas, WA
 Ph (360) 834-2500
 Fax (360) 834-8903

West
 Irvine, CA
 Ph (714) 250-0225
 Fax (714) 250-0438
 San Jose, CA
 Ph (408) 436-4900
 Fax (408) 436-0924

Central
 Romeoville, IL
 Ph (708) 226-2400
 Fax (708) 759-8572
 Auburn Hills, MI
 Ph (810) 377-9220
 Fax (810) 377-9222
 Austin, TX
 Ph (512) 349-7262
 Fax (512) 349-7002
 DFW Airport, TX
 Ph (214) 574-5205
 Fax (214) 456-0360
 Houston, TX
 Ph (713) 955-9909
 Fax (713) 955-9910

East
 Burlington, MA
 Ph (617) 270-7979
 Fax (617) 229-9117
 Annadale, NJ
 Ph (908) 713-0505
 Fax (908) 713-0566
 Durham, NC
 Ph (919) 941-0065
 Fax (919) 941-0066

Distributors

Future Electronics
 Canada
 Ph (514) 694-7710
 Fax (514) 695-3707

Marshall Industries
 El Monte, CA
 Ph (800) 522-0084
 Fax (818) 307-6173
 URL <http://www.marshall.com>

Milgray
 Farmindale, NY
 Ph (800) MILGRAY (645-4729)
 Fax (516) 293-6465

Reptron
 Tampa, FL
 Ph (800) 659-1361
 Fax (813) 854-2351

Sterling Electronics Corp.
 Houston, TX
 Ph (800) 745-5500
 Fax (713) 629-3939

IrDA is a registered name of the InfraRed Data Association.

FastFax Service: 1-800-833-9437

Product Information: 1-800-642-0261

World Wide Website: <http://www.sharpsma.com>