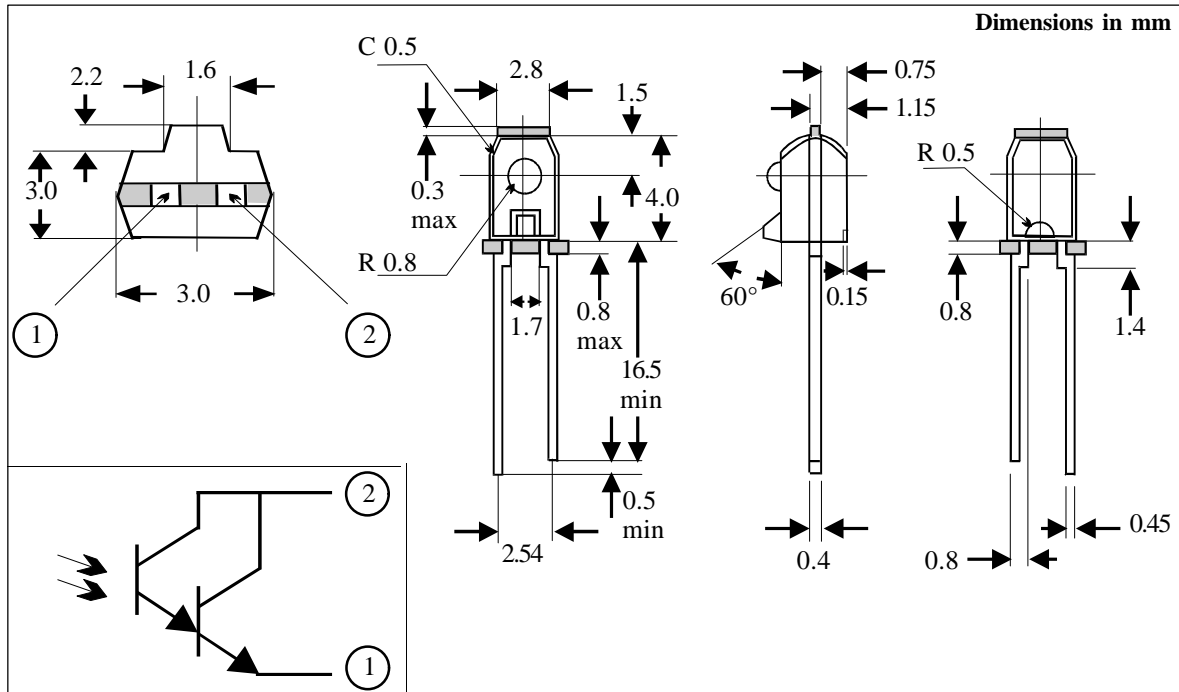


**SIDE LOOKING DETECTOR  
PHOTODARLINGTON OUTPUT**

**DESCRIPTION**

The IS659D is a NPN Silicon Photo Darlington mounted in a lateral side looking package. It is can be used in conjunction with IS658A - ( Gallium Arsenide Emitting Diode ).

**FEATURES**

- Side looking package.
- IS659D has dark plastic package for visible light cut out
- High sensitivity :-  
0.9mA min.  $I_c$  at  $E_e = 0.1\text{mW/cm}^2$
- All electrical parameters are 100% tested

**APPLICATIONS**

- Floppy disk drives
- Infrared applied systems
- VCRs, Video camera
- Optoelectronic switches

**ABSOLUTE MAXIMUM RATINGS  
(25°C unless otherwise specified)**

Storage Temperature ——— -40°C to + 85°C  
 Operating Temperature ——— -25°C to + 85°C  
 Lead Soldering Temperature  
 (1/16 inch (1.6mm) from case for 10 secs) 260°C

**OUTPUT TRANSISTOR**

Collector-emitter Voltage  $BV_{CEO}$  ——— 35V  
 Emitter-collector Voltage  $BV_{ECO}$  ——— 6V  
 Collector Current  $I_c$  ——— 50mA  
 Power Dissipation ——— 75mW

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**ELECTRICAL CHARACTERISTICS (  $T_A = 25^\circ\text{C}$  Unless otherwise noted )**

PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITION
Collector-emitter Breakdown ( $BV_{CEO}$ ) ( Note 1 )	35			V	$I_C = 1\text{mA}$ , $E_e = 0\text{mW/cm}^2$
Emitter-collector Breakdown ( $BV_{ECO}$ )	6			V	$I_E = 100\mu\text{A}$ , $E_e = 0\text{mW/cm}^2$
Collector-emitter Dark Current ( $I_{CEO}$ )			100	nA	$V_{CE} = 10\text{V}$ , $E_e = 0\text{mW/cm}^2$
On-State Collector Current $I_C$ ( ON )	0.9		27	mA	$V_{CE} = 2\text{V}$ , $E_e = 0.1\text{mW/cm}^2$
Collector-emitter Saturation Voltage $V_{CE(SAT)}$			1.0	V	$I_C = 1.5\text{mA}$ , $E_e = 1\text{mW/cm}^2$
Rise Time $t_r$ Fall Time $t_f$		80 70		$\mu\text{s}$ $\mu\text{s}$	$V_{CE} = 2\text{V}$ , $I_C = 10\text{mA}$ , $R_L = 100\Omega$
Peak Sensitivity Wavelength Beam Acceptance Angle		860 $\pm 13$		nm deg.	$I_F = 20\text{mA}$

Note 1 Special Selections are available on request. Please consult the factory.

