

## PIC - 2503

The PIC - 2503 is a digital output detector which incorporates a photodiode with signal processing circuit (amplifier, Schumitt Trigger, voltage regulator).

**FEATURES**

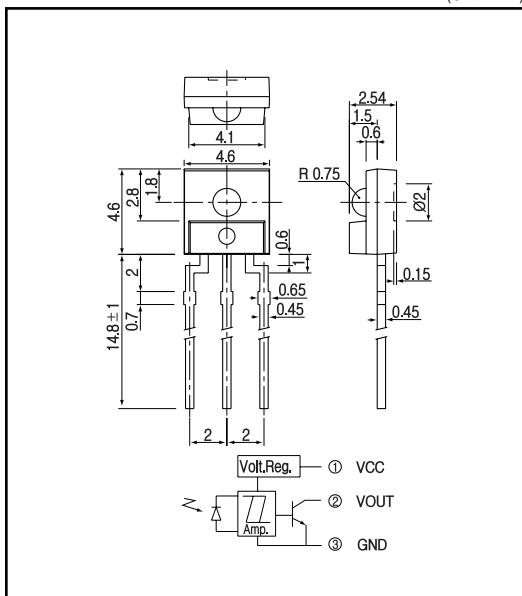
- Built - in Schumitt Trigger circuit
- Compatible to TTL and LSTTL
- Low cost

**APPLICATIONS**

- Floppy disc drives
- Copiers
- VCRs, Cassette decks

**DIMENSIONS**

(Unit : mm)

**MAXIMUM RATINGS**

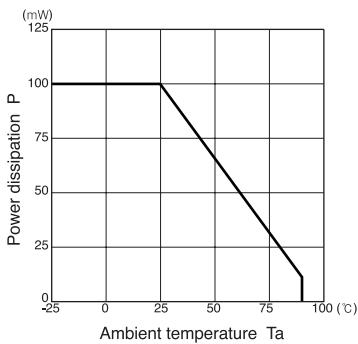
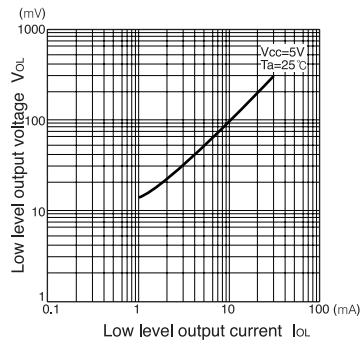
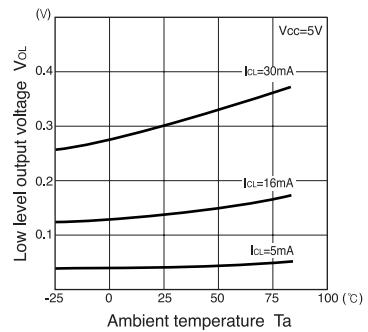
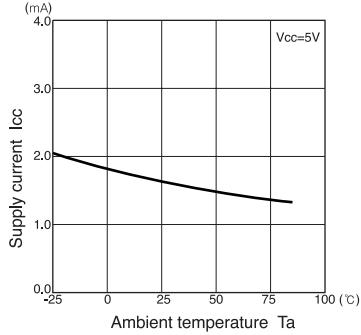
(Ta=25 °C)

Item	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	12	V
Low level output current	I <sub>OL</sub>	30	mA
Output transistor power dissipation	P <sub>O</sub>	100	mW
Operating temp.	T <sub>opr.</sub>	- 25 + 90	
Storage temp.	T <sub>stg.</sub>	- 40 + 100	
Soldering temp. <sup>1</sup>	T <sub>sol.</sub>	260	

\*1. For MAX. 5 seconds at the position of 2 mm from the resin edge.

**ELECTRO-OPTICAL CHARACTERISTICS**(V<sub>C</sub>=5V, Ta=25 °C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Supply voltage	V <sub>CC</sub>		4.5		5.5	V
High level supply current	I <sub>CH</sub>	Ee=0.5mW/cm <sup>2</sup>		1.7	3.0	mA
Low level supply current	I <sub>CL</sub>	Ee=0mW/cm <sup>2</sup>		1.7	3.0	mA
High level output voltage	V <sub>OH</sub>	Ee=0.5mW/cm <sup>2</sup> E=10k	4.5			V
Low level output voltage	V <sub>OL</sub>	I <sub>OL</sub> =10mA			0.4	V
Threshold illuminance	E <sub>eIL</sub>	= 940nm		0.03	0.2	mW/cm <sup>2</sup>
Hysteresis	E <sub>VHL</sub> /E <sub>VLH</sub>	R=1k	0.5	0.7	0.9	
Peak wavelength	P			900		nm
Switching speed	L-H propagation time	t <sub>PLH</sub>	Ee=0.5mW/cm <sup>2</sup> / 0mW/cm <sup>2</sup> = 940nm R=1k	5	10	μsec.
	H-L propagation time	t <sub>PHL</sub>		12	30	μsec.
	Rise time	tr		0.1	0.5	μsec.
	Fall time	tf		0.1	0.5	μsec.

**Photo IC****PIC - 2503****Power dissipation Vs.  
Ambient temperature****Low level output voltage Vs.  
Low level output current****Low level output voltage Vs.  
Ambient temperature****Supply current Vs.  
Ambient temperature****Radiant pattern**