

PIC - 1503

The PIC - 1503 is a digital output detector which incorporates a photodiode with signal processing circuit (amplifier, Schmitt Trigger, voltage regulator).

FEATURES

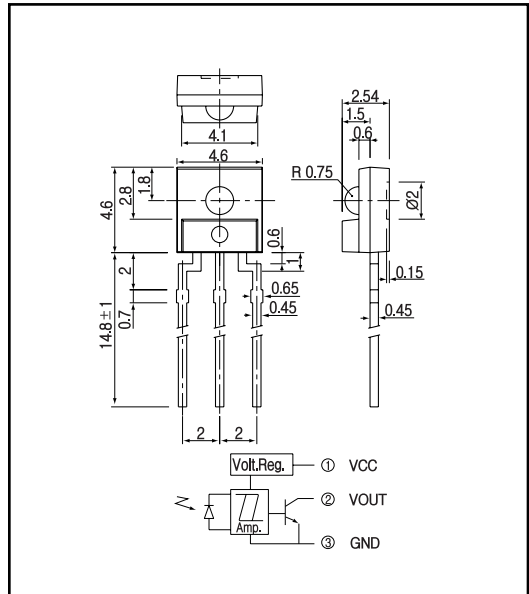
- Built-in Schmitt Trigger circuit
- Compatible to TTL and LSTTL
- Low cost

APPLICATIONS

- Floppy disc drives
- Copiers
- VCRs, Cassette decks

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit
Supply voltage	V _{CC}	10	V
Low level output current	I _{OL}	20	mA
Output transistor power dissipation	P _o	100	mW
Operating temp.	T _{opr.}	- 25 +85	
Storage temp.	T _{stg.}	- 40 +100	
Soldering temp.*1	T _{sol.}	260	

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

ELECTRO-OPTICAL CHARACTERISTICS

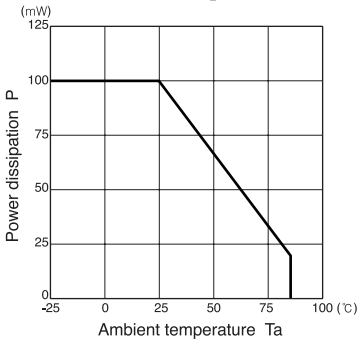
(V_c=5V, Ta=25)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.	
Supply voltage	V _{CC}		4.5		5.5	V	
High level supply current	I _{CCH}	Ee=0mW/cm ²		0.9	2	mA	
Low level supply current	I _{CCL}	Ee=0.5mW/cm ²		1.7	3.0	mA	
High level output voltage	V _{OH}	Ee=0mW/cm ² E _L =10k	4.5			V	
Low level output voltage	V _{OL}	I _{OL} =16mA			0.4	V	
Threshold illuminance	E _{thL}	=940nm		0.03	0.2	mW/cm ²	
Hysteresis	E _{VHL} /E _{VLH}	R _L =1k	0.5	0.7	0.9		
Peak wavelength	λ			900		nm	
Switching speed	L H propagation time	t _{PLH}			12	30	μsec.
	H L propagation time	t _{PHL}			2	6	μsec.
	Rise time	t _r			0.1	0.5	μsec.
	Fall time	t _f			0.1	0.5	μsec.

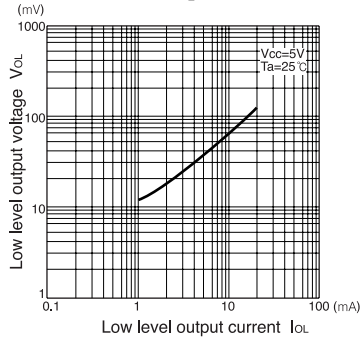
Photo IC

PIC - 1503

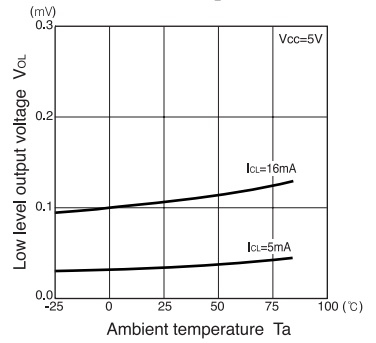
Power dissipation Vs. Ambient temperature



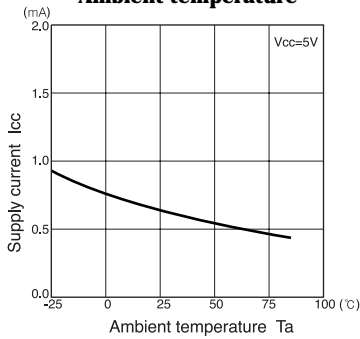
Low level output voltage Vs. Low level output current



Low level output voltage Vs. Ambient temperature



Supply current Vs. Ambient temperature



Radiant pattern

