

PIC - 0903

The PIC - 0903 is a digital output detector which incorporates a photodiode with signal processing circuit (amplifier, Schmitt Trigger, voltage regulator).

FEATURES

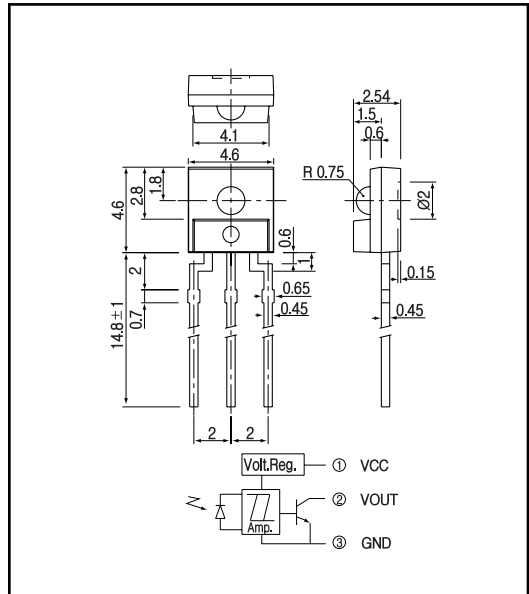
- Built - in Schmitt Trigger circuit
- Wide Vcc range
- Compatible to TTL and LSTTL

APPLICATIONS

- Floppy disc drives
- Copiers
- VCRs, Cassette decks

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit
Supply voltage	V _{CC}	17	V
Low level output current	I _{OL}	30	mA
Output transistor power dissipation	P _o	200	mW
Operating temp.	T _{opr.}	- 25 + 85	
Storage temp.	T _{stg.}	- 40 + 100	
Soldering temp.*1	T _{sol.}	260	

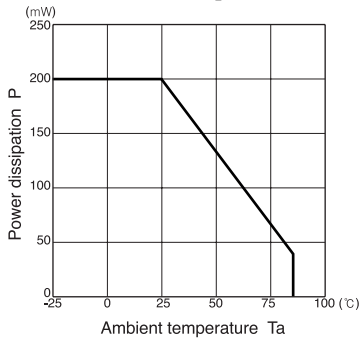
*1. For MAX. 5 seconds at the position of 2 mm from the resin edge.

ELECTRO-OPTICAL CHARACTERISTICS

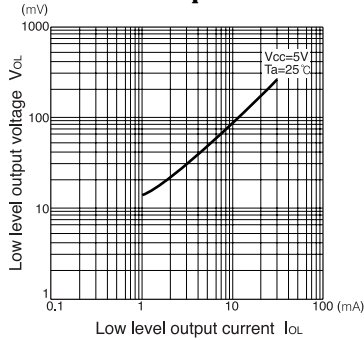
(V_c ≈ 5V, Ta=25)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Supply voltage	V _{CC}		4.5		17	V
High level supply current	I _{CCH}	E _v =0lx		3	6	mA
Low level supply current	I _{CCL}	E _v =100lx		3	6	mA
High level output voltage	V _{OH}	E _v =100lx, E=10K, V _{OUT} =5V	4.5			V
Low level output voltage	V _{OL}	E _v =100lx, I _L =16mA			0.4	V
L H Threshold illuminance	E _{VLH}		10	25		lx
H L Threshold illuminance	E _{VHL}			30	80	lx
Hysteresis	E _{VHL} /E _{VLH}	R _L =280	0.5	0.8	0.95	
Peak wavelength	P			900		nm
Switching speed	L H propagation time	t _{PLH}		3	9	µsec.
	H L propagation time	t _{PHL}		2	6	µsec.
	Rise time	t _r	E _v =100lx, R=280	0.1	0.5	µsec.
	Fall time	t _f		0.05	0.5	µsec.

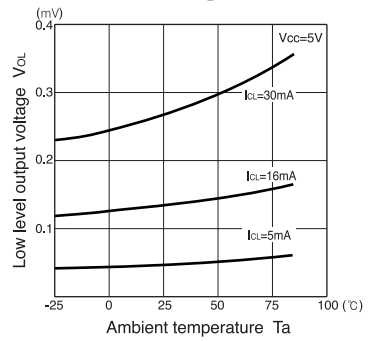
Power dissipation Vs. Ambient temperature



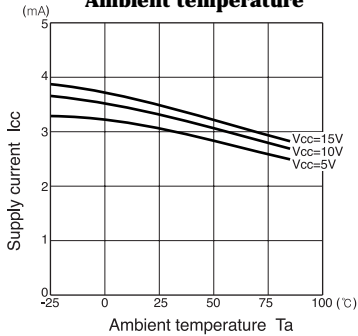
Low level output voltage Vs. Low level output current



Low level output voltage Vs. Ambient temperature



Supply current Vs. Ambient temperature



Radiant pattern

