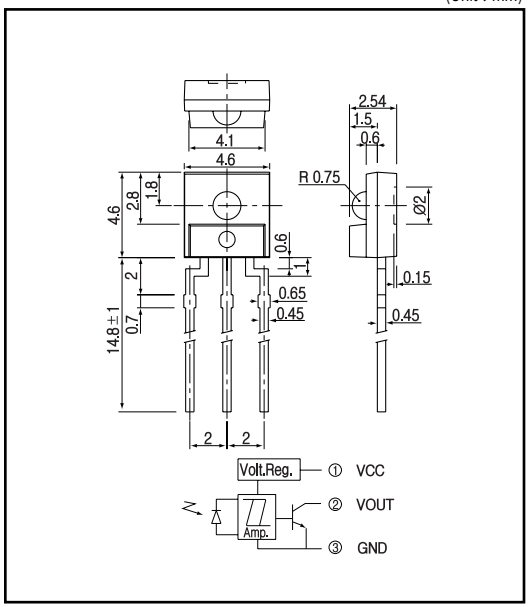
PIC - 0903

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

DIMENSIONS (Unit : mm)



FEATURES

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

APPLICATIONS

- Floppy disc drives
- Copiers
- VCRs, Cassette decks

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.	Topr.	−25 +85	℃
Storage temp.	Tstg.	−40 +100	℃
Soldering temp.*1	Tsol.	260	℃

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

ELECTRO-OPTICAL CHARACTERISTICS (V_{CC}=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, R=10KΩ, V_{OUT}=5V	4.5			V
Low level output voltage		V_{OL}	E_V=100lx, I_{OL}=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=280Ω	0.5	0.8	0.95	—
Peak wavelength		λP			900		nm
Switching speed	L→H propagation time	t_{PLH}	E_V=100lx, R_L=280Ω		3	9	μsec.
	H→L propagation time	t_{PHL}			2	6	μsec.
	Rise time	tr			0.1	0.5	μsec.
	Fall time	tf			0.05	0.5	μsec.

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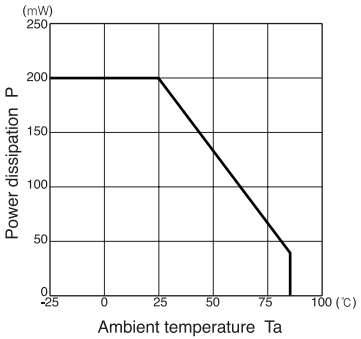
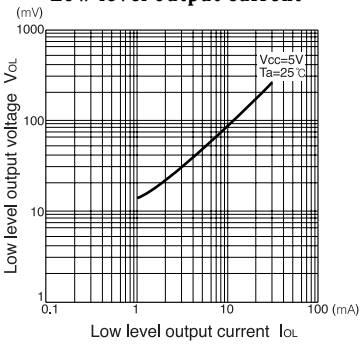
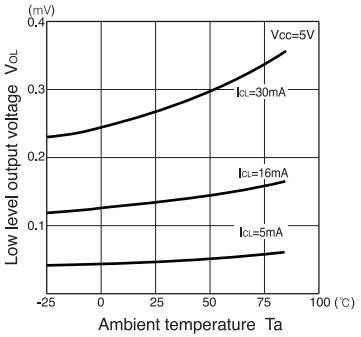
Power dissipation Vs. Ambient temperature



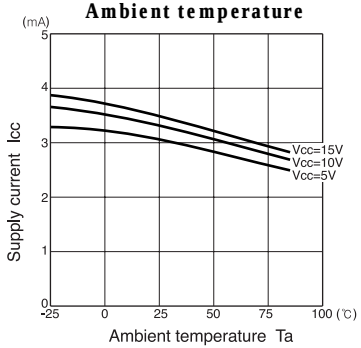
Low level output voltage Vs. Low level output current



Low level output voltage Vs. Ambient temperature



Supply current Vs. Ambient temperature



Radiant pattern