

ホトセンサユニット(透過形) Photosensor Units (Transmittive Type)

ON1503

- ・本資料に記載の品番は、従来品番です。
- ・ The part number mentioned in this datasheet is conventional part number.

■ 概要

ON1503は、ハイブリッド技術により、ホトインタラプタにアンプを内蔵した小型、軽量、高精度、高信頼性のホトセンサユニットです。

小型ながら大電流を直接開閉できるなど、機器装置の自動制御化に対応した位置検知用のホトセンサとして広く応用できます。

■ 特長

- アンプ内蔵形で小型、高信頼性。
- 位置検知精度が高い。
- オープンコレクタ出力。
- 大電流を直接開閉できる：100 mA
- 小型コネクタを使用。
- 5 V と 10 V の 2 電流が使用できる。

■ 用途

- 複写機の紙検知、位置検知
- シーケンス制御のセンサ
- NC 工作機械のリミット位置検知
- 回転数、回転速度検知
- X - Y テーブルの位置検知
- エンコーダ

■ Outline

The ON1503, is a small, light weight, high precision and high reliability photo sensor unit incorporating amplifier in a plastic housing. It can switch large current and widely applied as sensors used for position detection of automatic controlled equipment.

■ Features

- Small size and high reliability
- High positional resolution
- Open-collector output
- Large output current (100 mA)
- Power supply, output connection with small connector
- 5 or 10 V power supply is available

■ Use

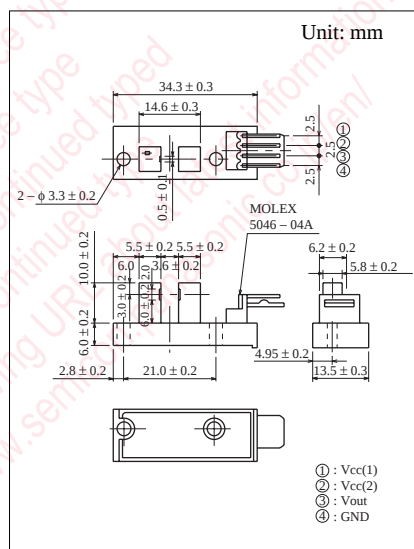
- Paper detection of copying machine, position detection
- Sensor of sequence control
- Limit position detection of NC equipment
- Detection of rotary positioning and speed
- Position detection of X - Y table
- Encoder

■ 絶対最大定格 Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Item	symbol	Value	Unit
電源電圧 Supply Voltage	V_{CC}	12	V
出力電圧 Output Voltage	$V_O(\text{Max})$	6	V
出力電流 Output Current	$I_O(\text{Max})$	20	mA
動作周囲温度 Operating Ambient Temperature	T_{opr}	0 ~ +65	$^\circ\text{C}$
保存温度 Storage Temperature	T_{stg}	-20 ~ +75	$^\circ\text{C}$

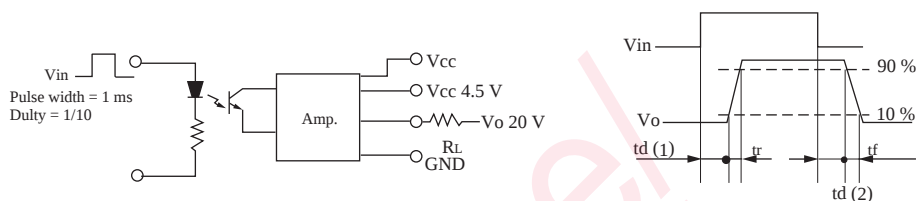
■ 電気的特性 Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Item	symbol	Condition	Min	typ	Max	Unit
電源電圧 (1) Supply Voltage(1)	V_{CC}		9	10	11	V
電源電圧 (2) Supply Voltage(2)	V_{CC}		4.5	5.0	5.5	V
“L”出力電圧 “L” Output Voltage	V_{OL}	$V_{CC} = 4.5\text{ V}, I_O = 100\text{ mA}$		0.3	0.6	V
“H”出力電圧 (1) “H” Output Voltage(1)	$V_{OH(1)}$	$V_{CC} = 4.5\text{ V}, V_O = 20\text{ V}, R_L = 10\text{ k}\Omega$	19.8			V
“H”出力電圧 (2) “H” Output Voltage(2)	$V_{OH(1)}$	$V_{CC} = 4.5\text{ V}, V_O = 20\text{ V}, R_L = 10\text{ k}\Omega$ 50 % シャ光時/50 % at cutoff lighting	19.8			V
上昇時間 Rise Time (Emission, Light Current)	tr^*	$V_{CC} = 24\text{ V}, R_L = 470\ \Omega$		1		$\mu\text{ s}$
遅れ時間 Full Time (Emission, Light Current)	tr^*			1		$\mu\text{ s}$
遅れ時間 Deley Time	$t_{d(1)^*}$			50		$\mu\text{ s}$
遅れ時間 Deley time	$t_{d(2)^*}$			100		$\mu\text{ s}$
応答周波数 Response Characteristics	f^*			2		kHz

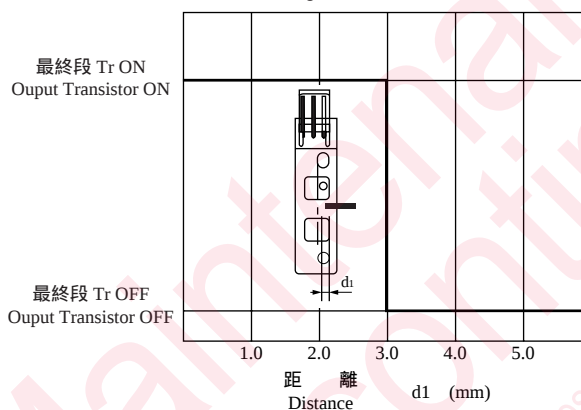


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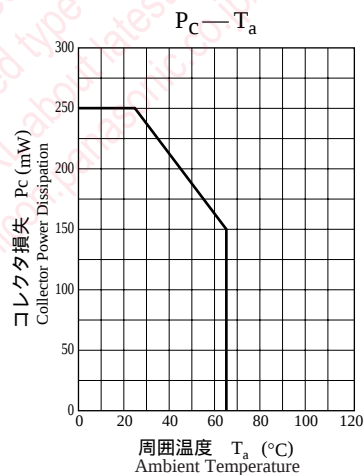
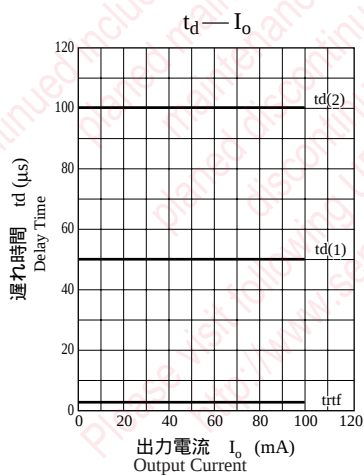
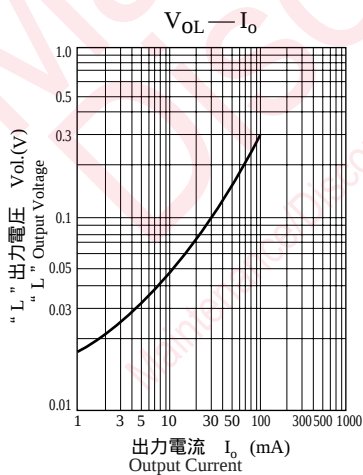
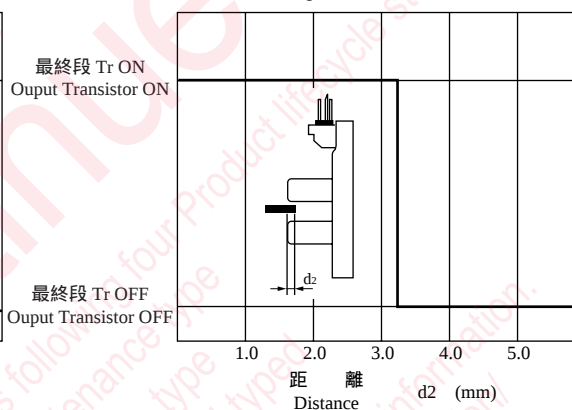
* 遅れ時間試験回路 / Delay time measuring circuit



(1)
検知位置特性
Detecting Position Characteristics



(2)
検知位置特性
Detecting Position Characteristics



Caution for Safety

 **DANGER**

■ This product contains Gallium Arsenide (GaAs).

GaAs powder and vapor are hazardous to human health if inhaled or ingested. Do not burn, destroy, cut, cleave off, or chemically dissolve the product. Follow related laws and ordinances for disposal. The product should be excluded from general industrial waste or household garbage.

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