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

・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.

ON1531HA – (A), ON1531LA – (A)

■概　要

ON1531HA– (A), ON1531LA– (A)は、発光素子に高効率のGaAs赤外発光ダイオードを、受光部にホトダイオードと信号処理回路を１チップに集積化した集積化受光素子を使用した小型、軽量、高精度、高信頼性のホトセンサユニットです。

■ Outline

The ON1531HA– (A) and ON1531LA– (A) are small, light weight, high precision and high reliability photo sensor units composed of a high effective GaAs infrared light emit-ting diode and an integrated photodiode and signal proces-sing circuit.

■特　長

- アンプ内蔵形で小形、高信頼性。
- 位置検知精度が高い。
- オープンコレクタ出力。
- 接続端子は小形コネクタを使用。
- ワンタッチ取り付けタイプ。
- 光照射時に出力トランジスタがON, OFFする(２種類)。
  ON1531HA-(A)：投光 OFF タイプ
  ON1531LA-(A)：投光 ON タイプ

■ Features

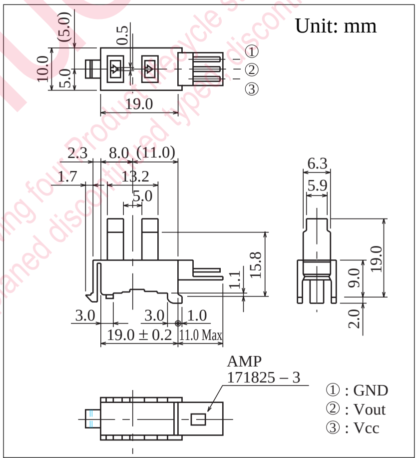
- Small size and high reliability
- High positional resolution
- Open-collector output
- Power supply, output connection with small connector
- Easy to fix
- ON1531HA– (A): Normally OFF type
  ON1531LA– (A): Normally ON type

■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

■ 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



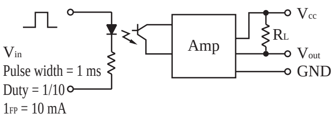
■絶対最大定格　Absolute Maximum Ratings (T_a = 25°C)

Item		symbol	Value	Unit
電源電圧	Supply Voltage	V_{CC}	6	V
出力電圧	Output Voltage	$V_{O\ (Max)}$	30	V
出力電流	Output Current	$I_{O\ (Max)}$	20	mA
コレクタ損失	Collector Power Dissipation	P_C	200	mW
動作周囲温度	Operating Ambient Temperature	T_{opr}	0 ~ + 65	°C
保存温度	Storage Temperature	T_{stg}	–10 ~ +75	°C

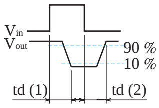
■電気的特性　Electrical Characteristics (T_a = 25°C)

Item		symbol	Condition	Min	typ	Max	Unit
電源電圧	Supply Voltage	V_{CC}		4.75	5.00	5.25	V
“ H ”出力電圧	“ H ”Output Voltage	V_{OH}	物体非検知時(物体非検知時) V_{CC} = 5 V, R_L = 10 kΩ Object at Detection (Object at Non Detection) V_{CC} = 5 V, R_L = 10 kΩ	4.0			V
“ L ”出力電圧	“ L ”Output Voltage	V_{OH}	物体非検知時(物体非検知時) V_{CC} = 5 V, I_O = 10 mA Object at Detection (Object at Non Detection) V_{CC} = 5 V, I_O = 10 mA		0.2	0.4	V
遅れ時間(1)	Delay time (1)	$t_{d(1)}$*	V_{CC} = 5 V, R_L = 1.5 kΩ		10		μs
遅れ時間(2)	Delay time (2)	$t_{d(2)}$*	V_{CC} = 5 V, R_L = 1.5 kΩ		20		μs

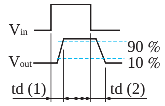
*試験回路(LED強制パルス駆動)
Test circuit (LED forced pulse driving)



投光ON タイプ：ON1531LA – (A)
Normally ON type: ON1531LA – (A)



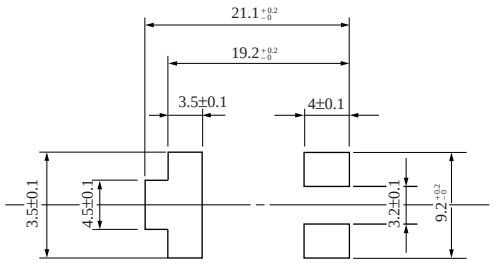
投光OFF タイプ：ON1531HA – (A)
Normally OFF type: ON1531HA – (A)



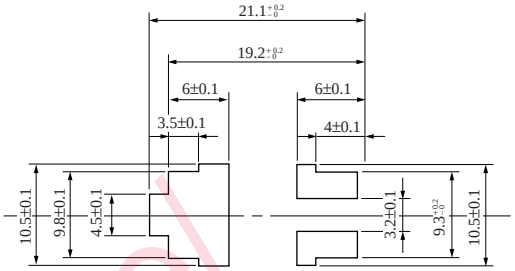
■**推奨取り付け穴図**（プレス側からの挿入取り付け推奨穴図）

Recommerdation figure for fixing hole (Figure from the press side)

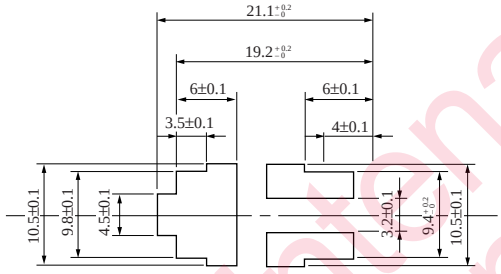
（1）For t = 0.9 ～ 1.1 mm



（2）For t = 1.2 ～ 1.4 mm

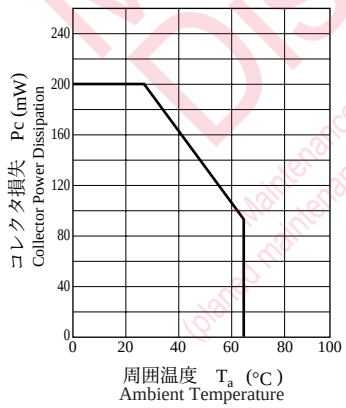


（3）For t = 1.5 ～ 1.7 mm

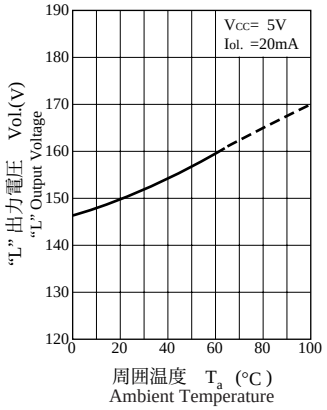


プレス側からの
挿入取り付け推奨穴図です

P_C — T_a



V_{OL} — T_a



⚠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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