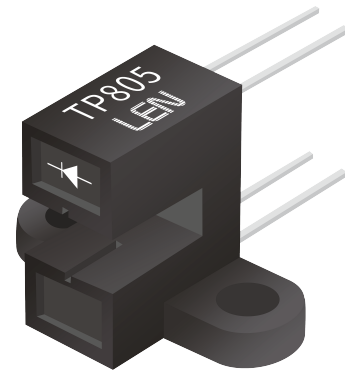


## Descriptions

**TP805** is a consist of Gallium Arsenide infra-red emitting diode and a NPN silicon phototransistor mounted in a black plastic housing. Phototransistor switching takes place whenever an opaque object passes through the slot. These series are designed for direct soldering into PC board or mounting in standard dual-in-line socket.



DIP-4

## Features

- ◇ Fast switching speed
- ◇ Non-contact switching
- ◇ For direct PC board or dual-in-line socket mounting

## Applications

- ◇ Printer
- ◇ Counter
- ◇ Scanner
- ◇ FAX machine

## Ordering Information

| Part Number | Package | Shipping Quantity             |
|-------------|---------|-------------------------------|
| TP805       | DIP-4   | 100 pcs / Bag , 600 pcs / Box |

### Absolute Maximum Ratings (T<sub>A</sub>=25°C)

| Parameter                   | Symbol           | Ratings    | Unit |
|-----------------------------|------------------|------------|------|
| Forward Current             | I <sub>F</sub>   | 50         | mA   |
| Reverse Voltage             | V <sub>R</sub>   | 5          | V    |
| Collector Current           | I <sub>C</sub>   | 20         | mA   |
| Power Dissipation           | P <sub>D</sub>   | 100        | mW   |
| Forward Surge Current (*1)  | I <sub>FSM</sub> | 3          | A    |
| Collector Power Dissipation | P <sub>C</sub>   | 175        | mW   |
| Collector-Emitter Voltage   | V <sub>CEO</sub> | 30         | V    |
| Emitter-Collector Voltage   | V <sub>ECO</sub> | 5          | V    |
| Operating Temperature       | T <sub>OPR</sub> | -40 ~ +85  | °C   |
| Storage Temperature         | T <sub>STG</sub> | -50 ~ +100 | °C   |
| Soldering Temperature       | T <sub>SOL</sub> | 260        | °C   |

Note: (\*1) Pulse Wide = 1μs, 300 pps

Electro-Optical Characteristics (TA=25°C)

| Parameter |                        | Symbol        | Conditions                          | Min | Typ | Max  | Unit          |
|-----------|------------------------|---------------|-------------------------------------|-----|-----|------|---------------|
| Input     | Forward Voltage        | $V_F$         | $I_F=20\text{mA}$                   |     | 1.2 | 1.35 | V             |
|           | Reverse Current        | $I_R$         | $V_R=5\text{V}$                     |     |     | 100  | $\mu\text{A}$ |
| Output    | C-E Breakdown Voltage  | $V_{CE0}$     | $I_C=1\text{mA}$                    | 30  |     |      | V             |
|           | E-C Breakdown Voltage  | $V_{ECO}$     | $I_E=0.1\text{mA}$                  | 5   |     |      | V             |
|           | Dark Current           | $I_{CE0}$     | $V_{CE}=10\text{V}$                 |     |     | 100  | nA            |
| Transfer  | C-E Saturation Voltage | $V_{CE(sat)}$ | $I_C=0.2\text{mA}, I_F=20\text{mA}$ |     |     | 0.4  | V             |
|           | Light Current          | $I_{C(ON)}$   | $V_{CE}=5\text{V}, I_F=20\text{mA}$ | 0.8 |     |      | mA            |

Typical Electro-Optical Characteristics Curves

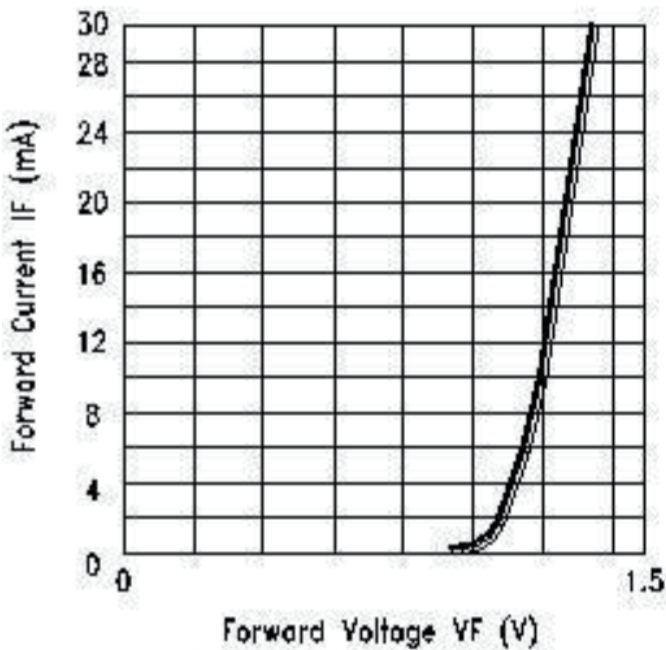


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

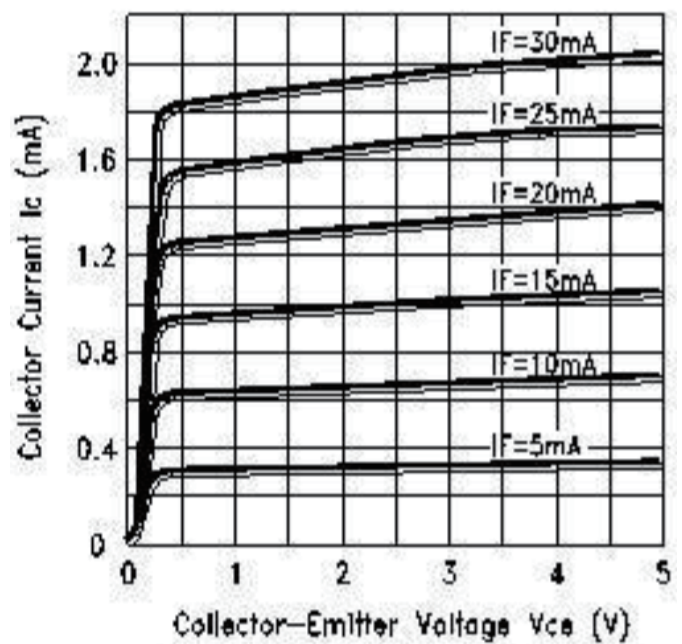


Fig.2 COLLECTOR CURRENT VS. COLLECTOR VOLTAGE

Typical Electro-Optical Characteristics Curves

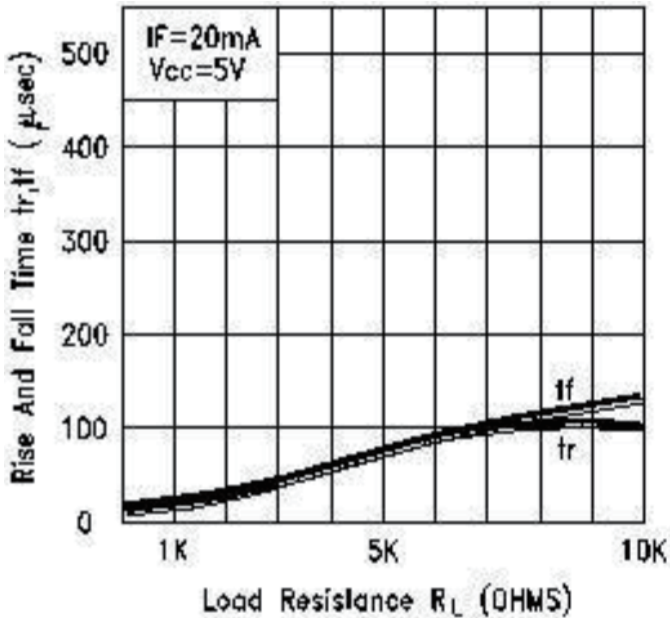


Fig.3 RISE AND FALL TIME VS. LOAD RESISTANCE

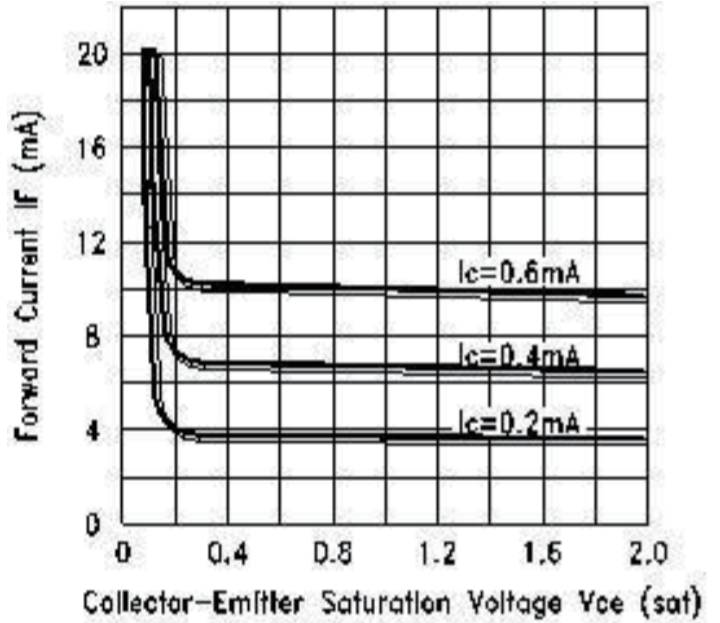


Fig.4 FORWARD CURRENT VS. Collector-Emitter Saturation Voltage

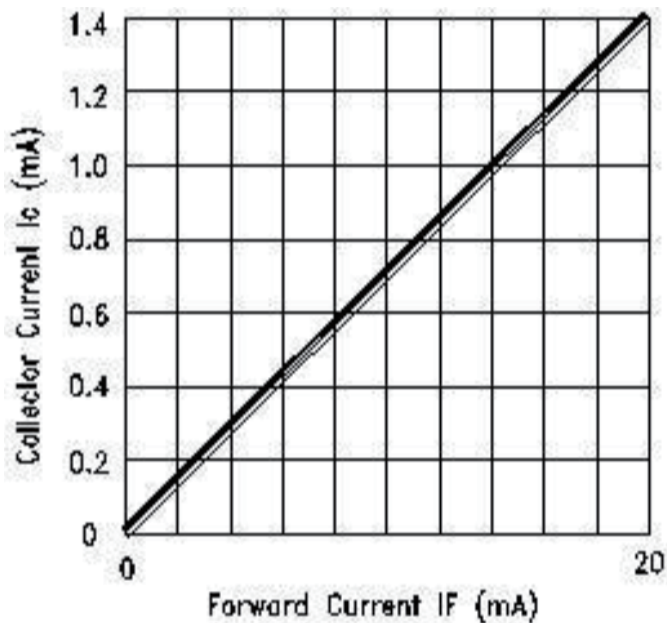
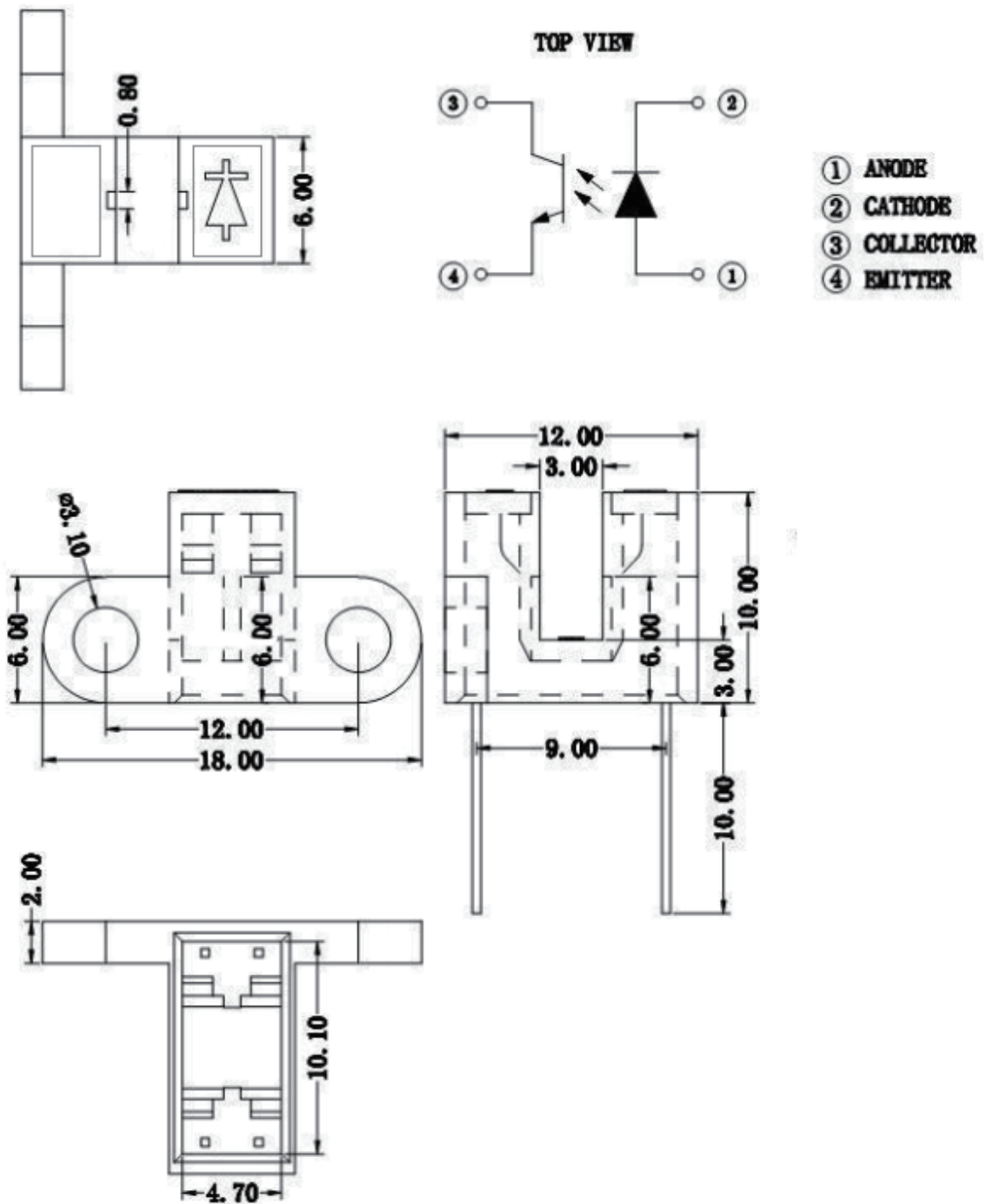


Fig.5 COLLECTOR CURRENT V.S FORWARD CURRENT

Package Dimensions

DIP-4



## DISCLAIMER

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

LONEON Technology Co., Ltd, agents, and employees, and all persons acting on its or their behalf (collectively, “LEN”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

LEN makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, LEN disclaims (1) any and all liability arising out of the application or use of any product, (2) any and all liability, including without limitation special, consequential or incidental damages, and (3) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on LEN’s knowledge of typical requirements that are often placed on LEN products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer’s responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer’s technical experts. Product specifications do not expand or otherwise modify LEN’s terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, LEN products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the LEN product could result in personal injury or death.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of LEN. Product names and markings noted herein may be trademarks of their respective owners.