

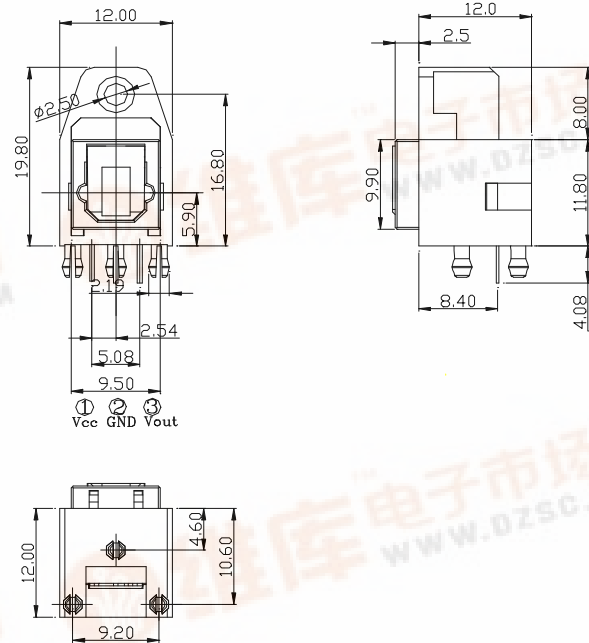
# Fiber Optic Receiver

MOF-R3K5

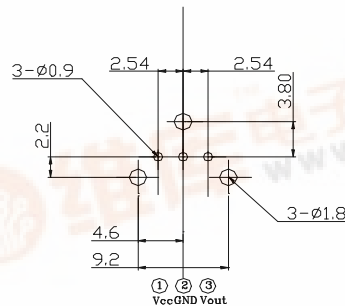
## Features

- 1.Uni-directional data transmission using plastic fiber
- 2.Signal transmission speed  
:MAX. 6 Mbps (NRZ signal)
- 3.Operating voltage :4.75 to 5.25 V
- 4.TTL compatible
- 5.Suitable for MOF-T3K5 Transmitter

## Outline Dimensions



Recommended drilling as viewd from the soldering face



NOTES:

Tolerance is  $\pm 0.3\text{mm}$  unless otherwise noted.

## Absolute Maximum Ratings

@  $T_A = 25^\circ\text{C}$

| Parameter                 | Symbol    | Rating      | Unit             |
|---------------------------|-----------|-------------|------------------|
| Supply voltage            | $V_{CC}$  | -0.5 to + 7 | V                |
| High Level Output Current | $I_{OH}$  | -1          | mA               |
| Low Level Output Current  | $I_{OL}$  | 5           | mA               |
| Operating temperature     | $T_{opr}$ | -20 to +70  | $^\circ\text{C}$ |
| Storage temperature       | $T_{stg}$ | -30 to +80  | $^\circ\text{C}$ |
| Soldering Temperature     | $T_{SOL}$ | 260*        | $^\circ\text{C}$ |

\* For 5s (1 times or less)

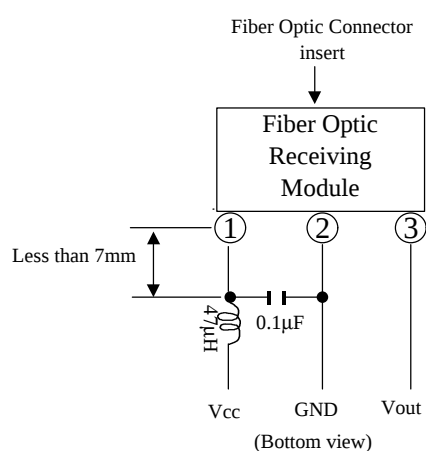
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## Recommended Operating Conditions

| Parameter                          | Symbol   | MIN. | TYP. | MAX.  | Unit |
|------------------------------------|----------|------|------|-------|------|
| Operating supply voltage           | $V_{cc}$ | 4.75 | 5.0  | 5.25  | V    |
| Operating transfer rate            | T        | 0.1  | ---  | 6     | Mbps |
| receiver input optical power level | $P_c$    | -22  | ---  | -14.5 | dBm  |

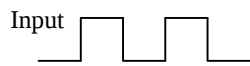
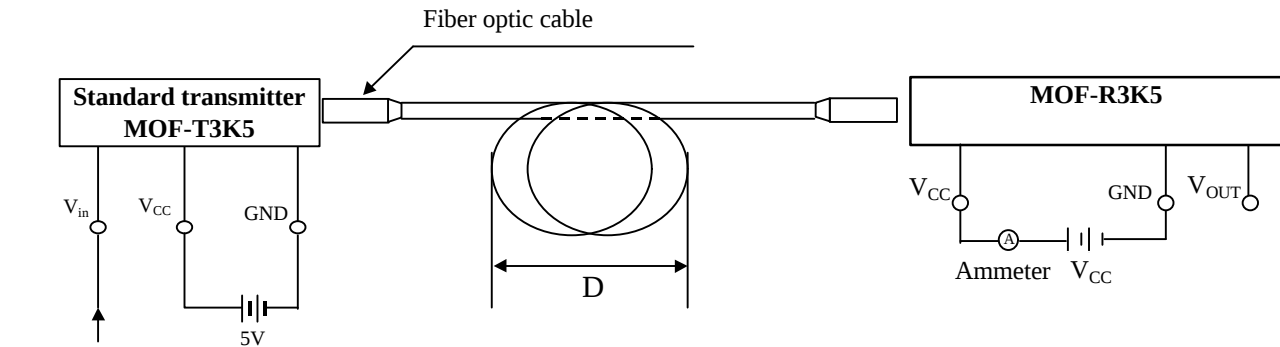
## Recommended Connection Method



## Electro-Optical Characteristics

| Parameter                 | Symbol        | Conditions      | MIN. | TYP. | MAX. | Unit |
|---------------------------|---------------|-----------------|------|------|------|------|
| Dissipation current       | $I_{cc}$      | Refer to Fig. 1 | ---  | 20   | 40   | mA   |
| High level output voltage | $V_{OH}$      | Refer to Fig. 2 | 2.7  | 4.4  | ---  | V    |
| Low level output voltage  | $V_{OL}$      | Refer to Fig. 2 | ---  | 0.2  | 0.4  | V    |
| Rise time                 | $t_r$         | Refer to Fig. 2 | ---  | 20   | 40   | ns   |
| Fall time                 | $t_f$         | Refer to Fig. 2 | ---  | 20   | 40   | ns   |
| Low → High delay time     | $t_{pLH}$     | Refer to Fig. 2 | ---  | ---  | 180  | ns   |
| High → Low delay time     | $t_{pHL}$     | Refer to Fig. 2 | ---  | ---  | 180  | ns   |
| Pulse width distortion    | $\Delta_{tw}$ | Refer to Fig. 2 | -30  | ---  | +30  | ns   |

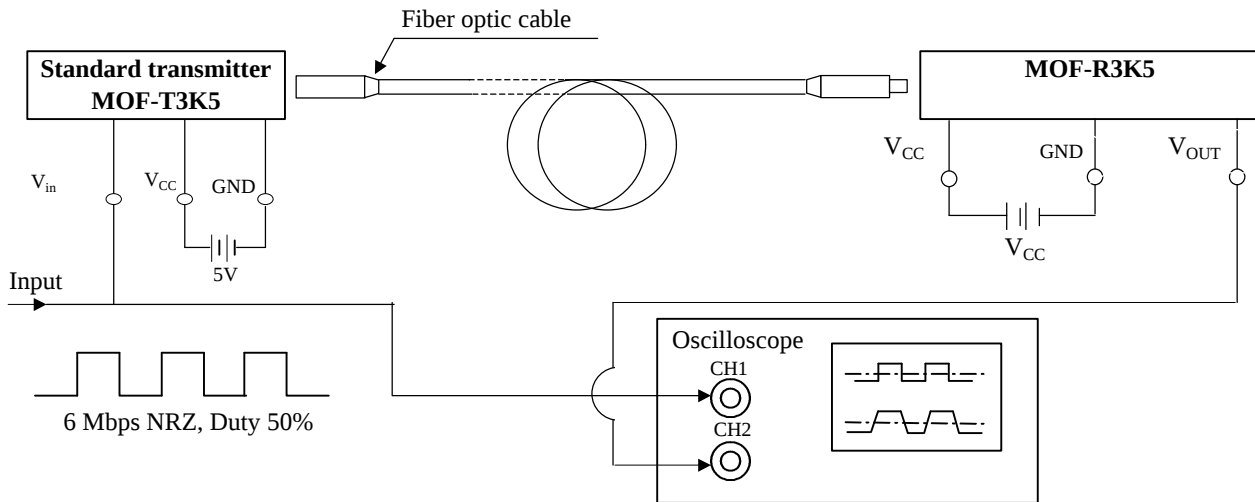
**Fig. 1 Measuring Method of Optical Output Coupling with Fiber**



6 Mbps NRZ, Duty 50% or 3 Mbps biphase mark PRBS signal

- Notes
- (1)  $V_{cc}=5.0V$  (State of operating)
  - (2) To bundle up the standard fiber optic cable, make it into a loop with the diameter  $D=10cm$  or more.
  - (3)  $P_c = -14.5 \text{ dBm}$
  - (4) Measured on an ammeter.

**Fig. 2 Measuring Method of Output Voltage and Pulse Response**



## Test item

| Test item                                                 | Symbol      |
|-----------------------------------------------------------|-------------|
| Low → High pulse delay time                               | $t_{PLH}$   |
| High → Low pulse delay time                               | $t_{PHL}$   |
| Rise time                                                 | $t_r$       |
| Fall time                                                 | $t_f$       |
| Pulse width distortion<br>$\Delta tw = t_{PHL} - t_{PLH}$ | $\Delta tw$ |
| High level output voltage                                 | $V_{OH}$    |
| Low level output voltage                                  | $V_{OL}$    |

