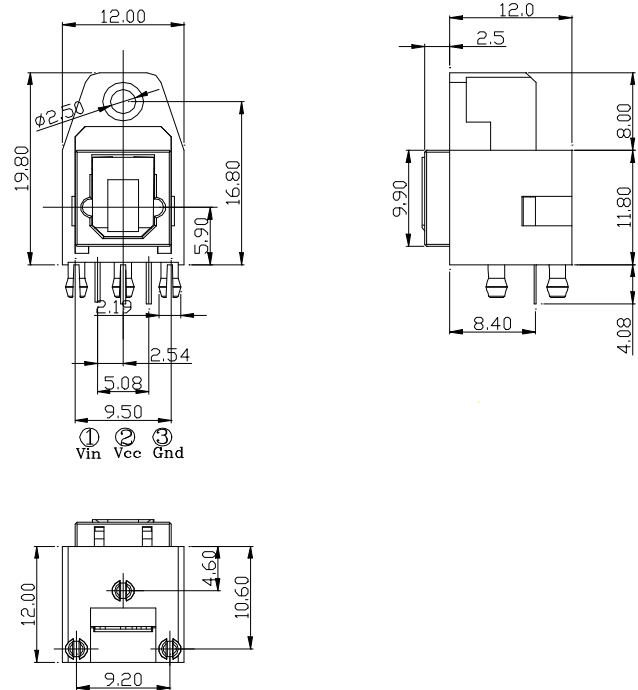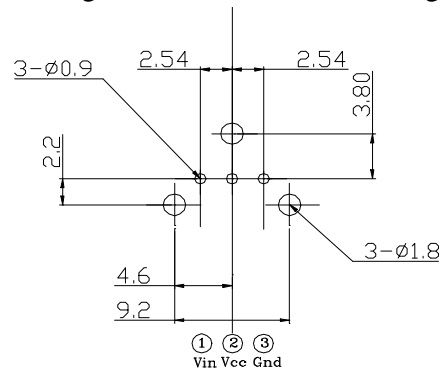## Features

1. Uni-directional data transmission using plastic fiber
2. Signal transmission speed
   : MAX. 12.5Mbps (NRZ signal)
3. Operating voltage : 4.75 to 5.25 V
4. TTL and high speed C-MOS LOGIC IC compatible

Outline Dimensions

Vin   Vcc   Gnd

Recommended drilling as viewd from the soldering face

① ② ③
Vin Vcc Gnd

NOTES:

Tolerance is ±0.3mm unless otherwise noted.

Absolute Maximum Ratings   @TA=25°C

Parameter	Symbol	Rating	Unit
Supply voltage	V_{cc}	-0.5 to + 7.0	V
Input voltage	V_{in}	-0.5 to Vcc +0.5	V
Operating temperature	T_{opr}	-20 to +70	^{o}C
Storage temperature	T_{stg}	-30 to +80	^{o}C
Soldering temperature [1]	T_{sol}	260	^{o}C

*1 For 5s (2 times or less)

REV: A2

09/04/2001

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	---	---	12.5	Mbps

Electro-Optical Characteristics

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Peak emission wavelength	λ_p		630	660	690	nm
Optical power output coupling with fiber	P_c	Refer to Fig. 1	-21	-18	-15	dBm
Dissipation current	I_{cc}	Refer to Fig. 2	---	8	13	mA
High level input voltage	V_{iH}	Refer to Fig. 2	2.1	---	V_{cc}	V
Low level input voltage	V_{iL}	Refer to Fig. 2	---	---	0.8	V
Low High delay time	t_{pLH}	Refer to Fig. 3	---	---	180	ns
High Low delay time	t_{pHL}	Refer to Fig. 3	---	---	180	ns
Pulse width distortion	Δ_{tw}	Refer to Fig. 3	-15	---	+15	ns

Fig. 1 Measuring Method of Optical Output Coupling with Fiber
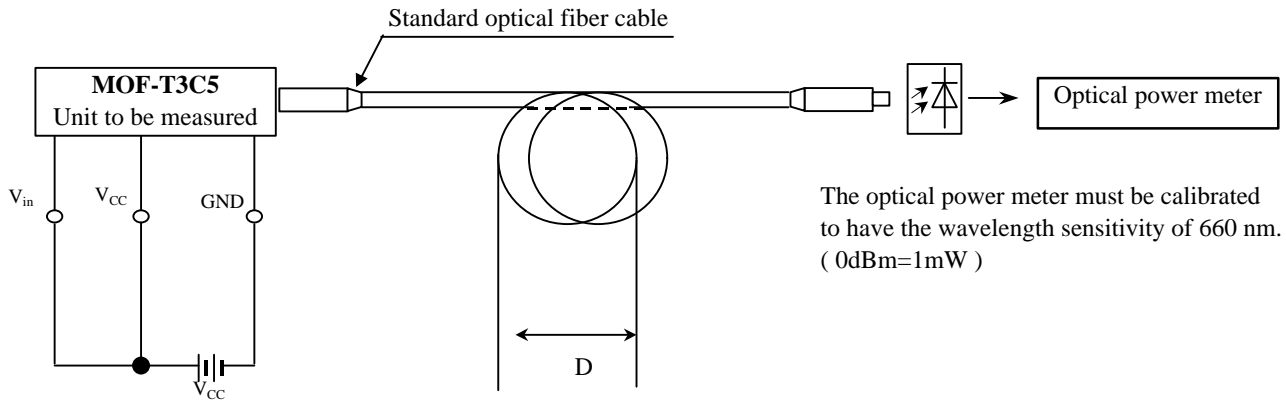
Standard optical fiber cable

MOF-T3C5
Unit to be measured

V_{in} V_{CC} GND

V_{CC}

Optical power meter

The optical power meter must be calibrated
to have the wavelength sensitivity of 660 nm.
(0dBm=1mW)

D

Notes (1)Vcc=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.

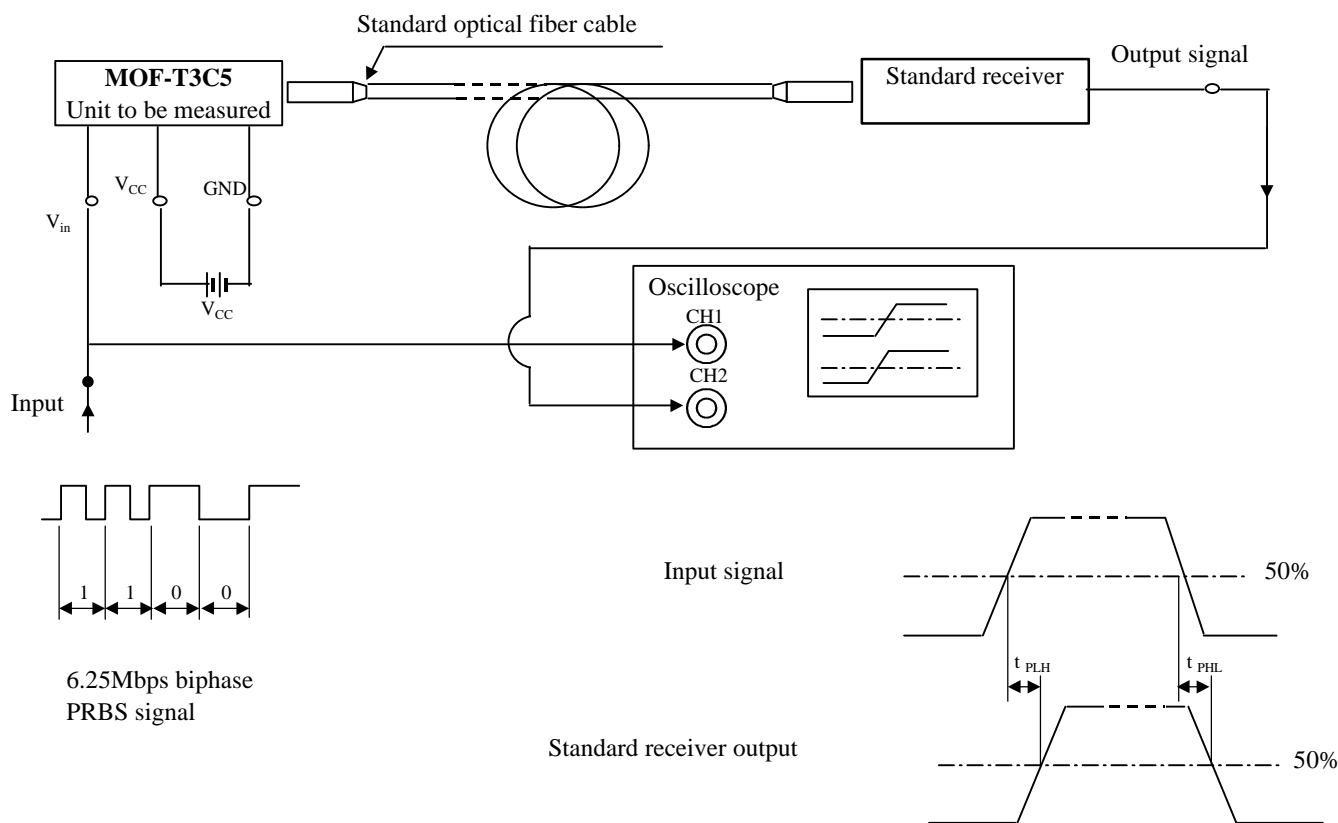## Fig. 2 Measuring Method of Intput Voltage and Supply Current
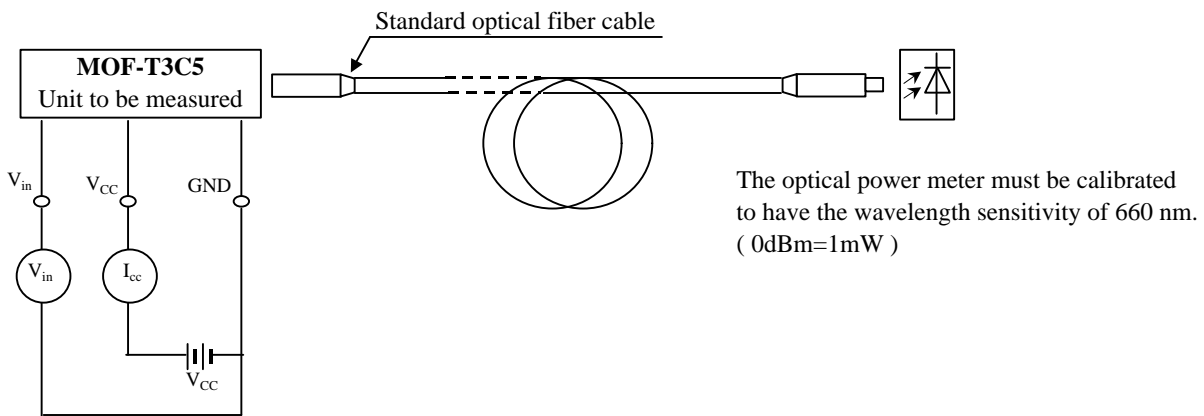
Standard optical fiber cable

MOF-T3C5
Unit to be measured

V_{in} V_{CC} GND

V_{in} I_{cc}

V_{CC}

The optical power meter must be calibrated
to have the wavelength sensitivity of 660 nm.
(0dBm=1mW)

Input conditions and judgement method

Conditions	Judgement method
V_{in}=2.1V or more	-21dBm<=Pc<=-15dBm, Icc=13mA or less
V_{in}=0.8V or less	Pc<=-36dBm, Icc=13mA or less

Note: V_{cc}=5.0V (State of operating)

REV : A2

09/04/2001

Fig.3 Measuring Method of Pulse Response

Standard optical fiber cable

MOF-T3C5
Unit to be measured

Standard receiver

Output signal

V_{CC} GND

V_{in}

V_{CC}

Oscilloscope

CH1

CH2

Input

1 1 0 0

6.25Mbps biphase
PRBS signal

Input signal — 50%

t_{PLH} t_{PHL}

Standard receiver output — 50%

Test item

Test item	Symbol	Test condition
Low High pulse delay time	t_{PLH}	Refer to the above prescriptions
High Low pulse delay time	t_{PHL}	Refer to the above prescriptions
Pulse width distortion	Δtw	$\Delta tw = t_{PHL} - t_{PLH}$

Notes (1) The waveform write time shall be 4 seconds. But do not allow the waveform to be distorted by increasing the brightness too much.

(2) Vcc=5.0 V (State of operating)

(3) The probe for the oscilloscope must be more than 1M and less than 10pF.

UNi
Unity Opto Technology Co., Ltd.

REV : A2

09/04/2001