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A. General Description

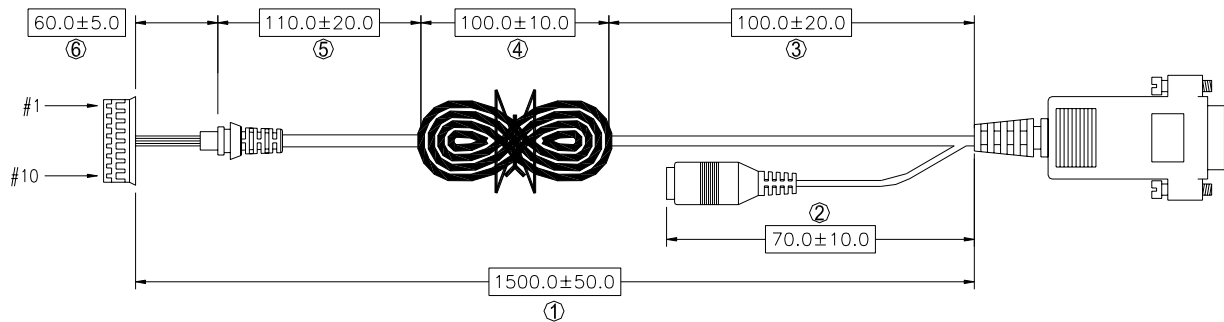
This MCR4 series linear imaging bar code scanner module features a scan speed of 85 scans/sec with small footprint to meet all applications. Built-in LED, Software commands supported and the affordable costs, the durable design with no moving parts delivers the best choice for the contact scanning required application.



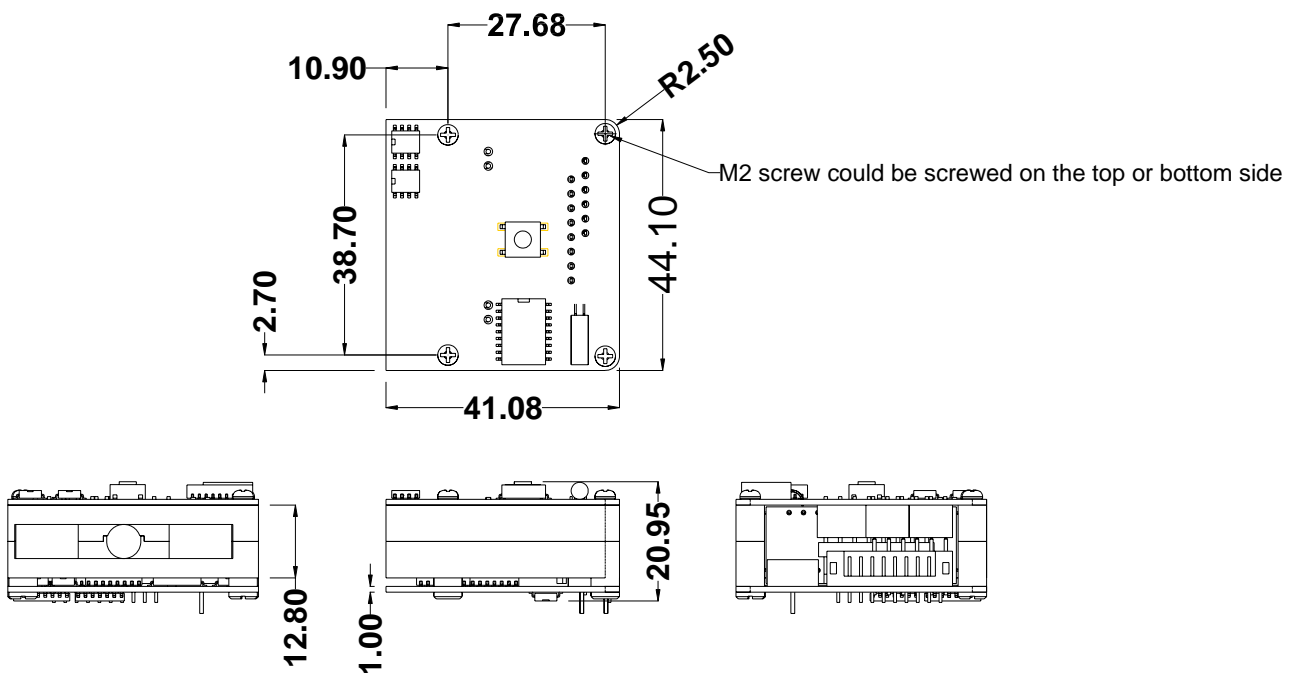
B. Physical Characteristics

Weight	
Body weight	Approx. 1.06 oz (30 gm)
Cable weight	Approx. 2.47 oz (70 gm)
Material	
Cable Length	5FT. (150 cm)
Connector	
Screw Standard	M2 X 7 mm
Dimension	
	44 mm X 41 mm X 21 mm

(a) Cable Drawing



(b) Mechanical Drawing





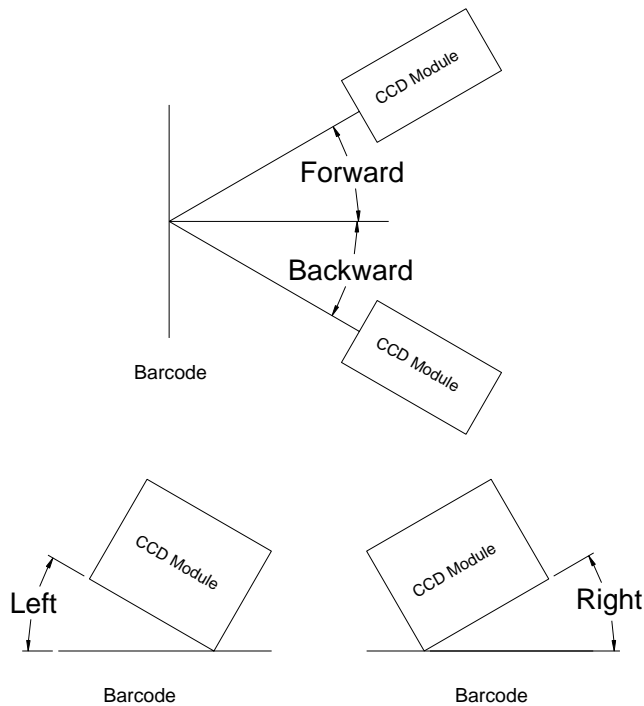
C. Electrical Characteristics

Interface	RS232
Supply Voltage	DC +5V \pm 5%
Output Voltage (Typ.)	\pm 9V
Output low Voltage (Max.)	-
Current Draw	
Power On (Typ.)	60 mA
Stand by (Typ.)	45 mA
Operation (Typ.)	85 mA



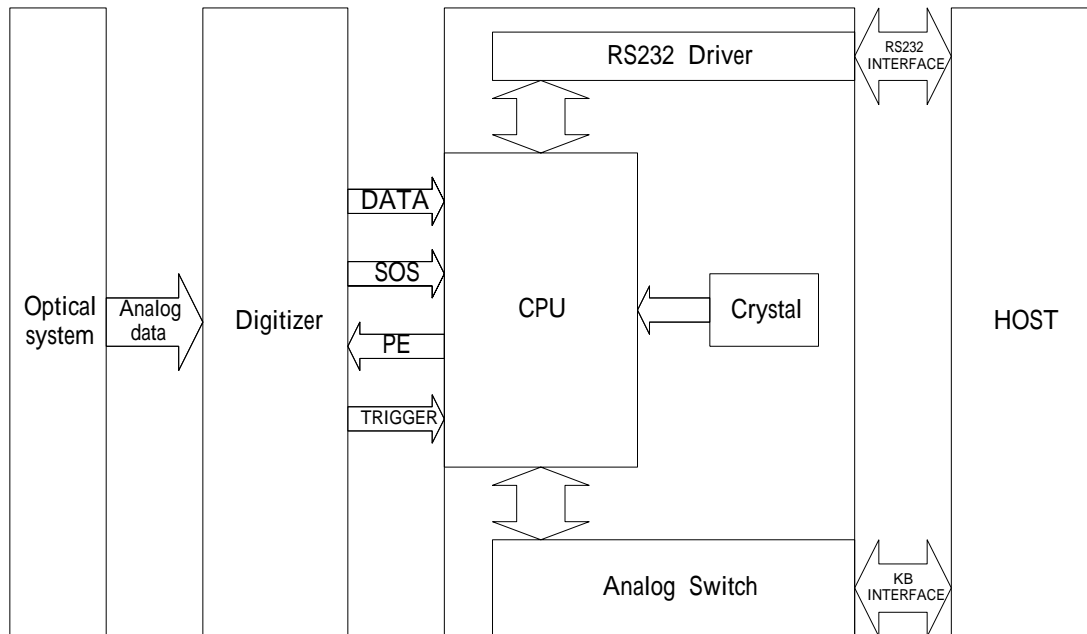
D. Performance

Light Source	632 nm
Sensor	Linear CCD Sensor
Processor Type	8051 compatible
Operating Freq.	29.4912 MHz
Scan Rate	85 ± 10 scans/sec
Reading Distance	70 mm
Width of Field	55 mm
Resolution	0.1mm @ PCS 0.9
Print Contrast Ratio	PCS 0.45 @ 0.1mm
Reading Angle	<i>Test Conditions: Code 39, 10mil, PCS 0.9</i>
Forward & Backward	± 70°
Left & Right	± 60°
Dead Zone	± 5°
Ambient Light	
Fluorescent lamp	5000 Lux Max.
Direct sun light	3000 Lux Max.

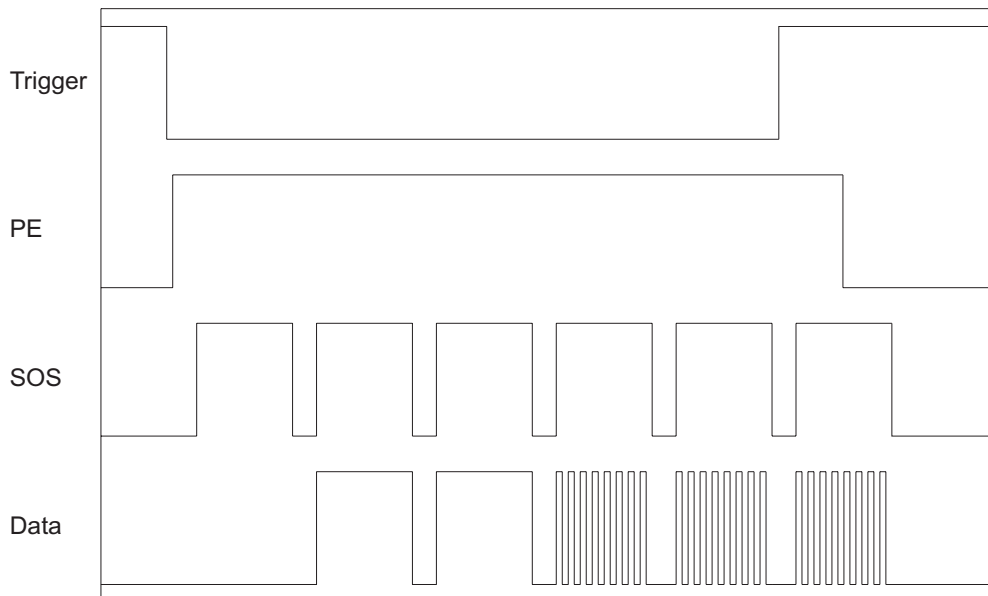


E. Function Block Diagram

a) Circuit Block



b) Function Map





F. RS232 Characteristic

a)RS-232 Parameters

Communication standard RS-232C	
Communication speed	600,1200,2400,4800,9600, 19200 (bps)
Data Format	
start bit	1 bit , 2 bits
data bits	7 bits , 8 bits
parity	None, Odd , Even , Space , Mark
stop bit	1 bit , 2 bits

b)Function Description

TXD	Transmit Data	Host←Mcr4
RXD	Receive Data	Host→Mcr4
RTS	Request to Send	Host←Mcr4
CTS	Clear to Send	Host→Mcr4
GND	Signal Ground	Host—Mcr4
VCC	Power	Host—Mcr4

G. Environmental

Operating Temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage Temperature	-20 °C to 70 °C (-4 °F to 158 °F)
Relative Humidity	20% to 95% (Non-condensing)



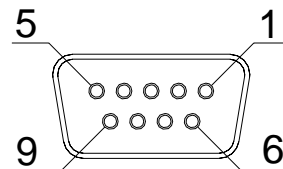
H. Readable Symbologies

	Readable	Default Enable
All UPC/EAN/JAN	V	V
EAN128 Code	V	V
Code 39	V	V
Code 39 Full ASCII	V	
Code32 / Italian Pharmacy	V	
Code 128	V	V
CODABAR/NW7	V	V
Interleave 25	V	V
Industrial 25	V	
Matrix 25	V	
MSI/PLESSEY	V	
Telepen	V	
Code 93	V	
Code 11	V	
China Postage	V	

I. Pin Assignment

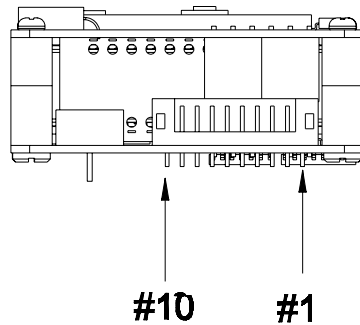
DB 9 Female

Pin No.	Function
2	TXD
3	RXD
5	GND
7	CTS
8	RTS
9	Vcc/+5V
Power Lead	Vcc/+5V

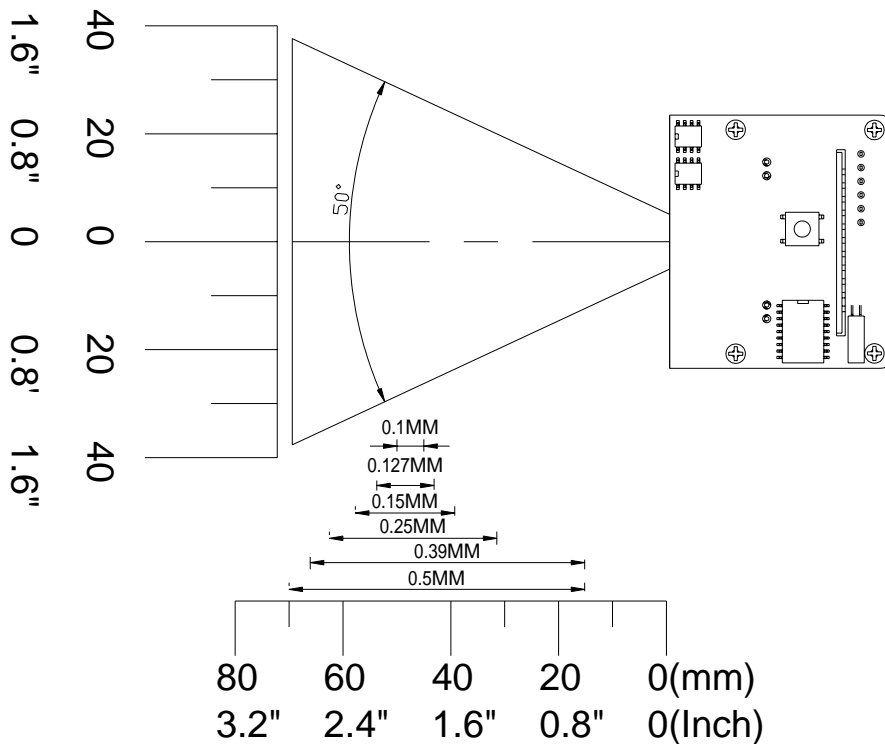


Decoder Data Output Connector

Function	Fin No.	Function	Fin No.
Vcc(+5V)	1	KB_DATA	6
KB_CLOCK	2	HOST_DATA	7
HOST_CLOCK	3	GND	8
RXD	4	RTS	9
TXD	5	CTS	10



J. Scan Map





K. Reliability

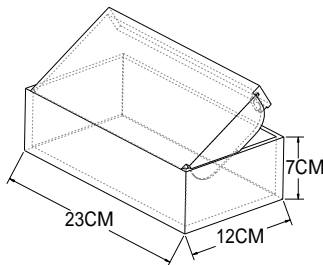
Life Time	
Light Source	40,000 hours
Trigger Switch	300,000 times
MTBF(Calculated)	22,000 hours
Thermal Shock	
High Temp.	60 °C (140 °F)
Low Temp.	-20 °C (-4 °F)
Cycle Time	30 minutes for high temp. , 30 minutes for low temp.
Cycles	24 cycles
Cable Test	25,000 times minimum (30 times/min @ 500g/90 °)
Mechanical Shock	40 inch (100 cm) Drop on Concrete Surface



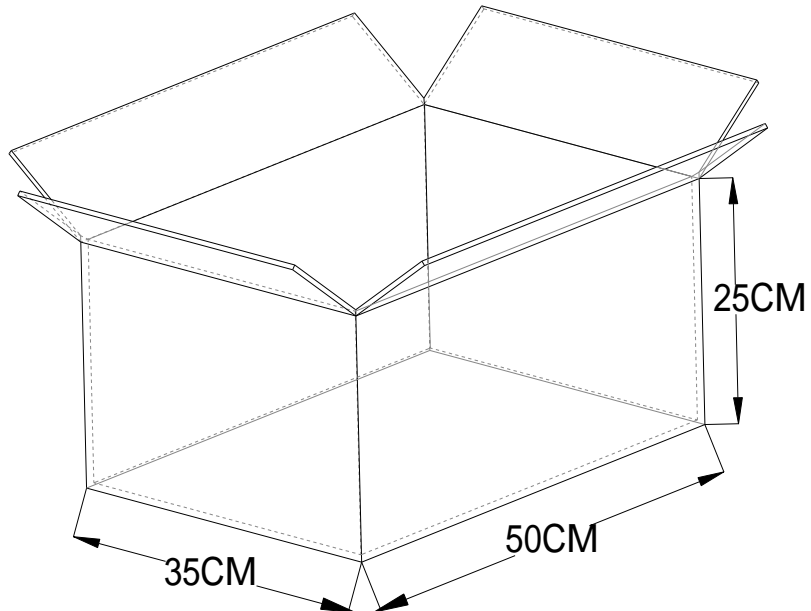
L. Packing

Dimension	
Unit	7 cm X 12cm X 23 cm
Carton	25 cm X 35 cm X 50 cm
Weight	
Unit	250 g
Carton	6 Kg (Q'ty :20 pcs)
Storage	
Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Humidity	20% to 95% (Non-condensing)

Unit :

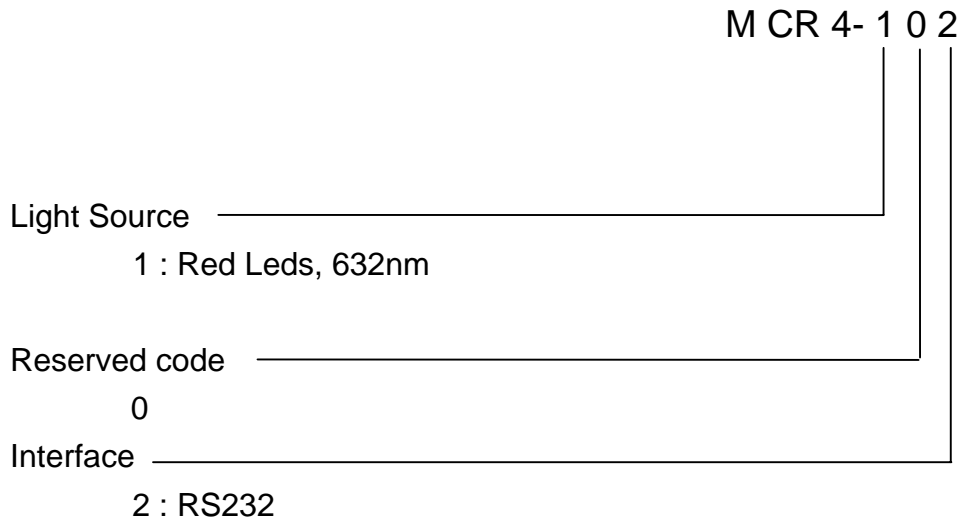


Carton :





M. Part Number



Cable P/N :

Interface	Cable P/N:
RS232	004FS102

