

CUSTOMER : \_\_\_\_\_

NO. : MKM-

EDIT :

DATE :

# SPECIFICATION FOR APPROVAL

PRODUCT : 2.3" Single Digit 7-Segment Numeric Display

MODEL NO. MD-2310/2317

APPROVAL			REVISION
CHK	CHK	APPD.	
REMARKS			



**MIKWANG ELECTRONICS CO., LTD.**

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# MI KWANG ELECTRONICS MD-2310/2317

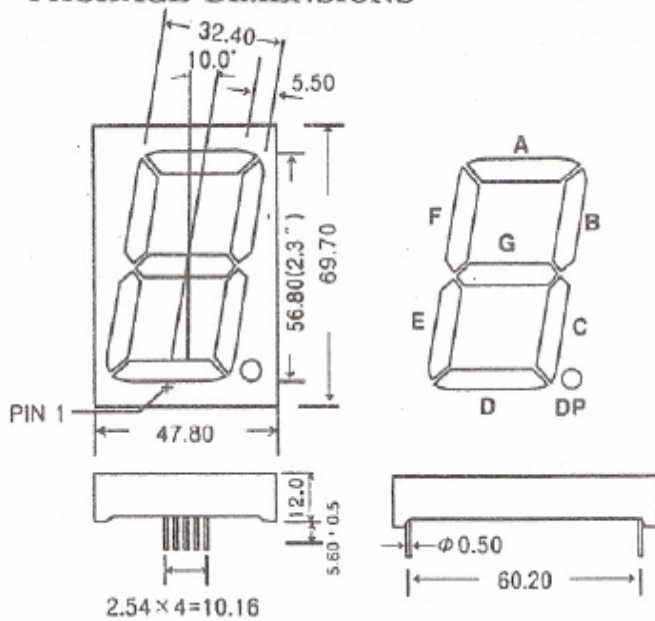
## 2.3 Inch Single-Digit 7-Segment Numeric Display

### GENERAL DESCRIPTION

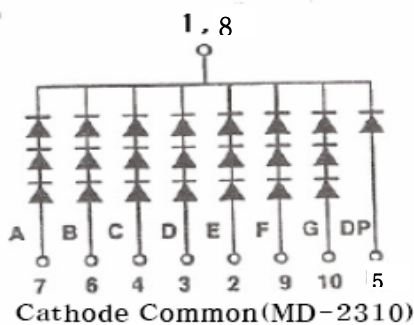
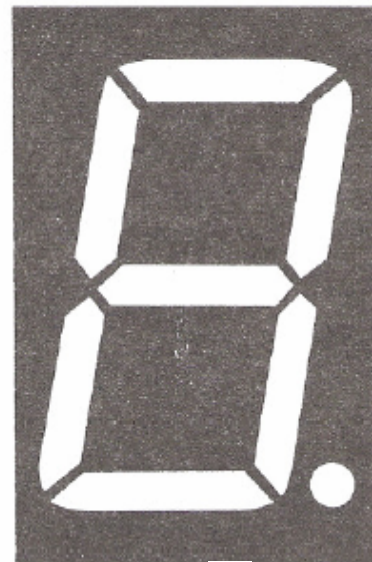
The MD-2310 and MD-2317 series are high performance epoxy resin molded 1-digit 7-segment LED displays for an application which space is at a premium.

The character height is approximately 2.3-inch(56.9mm) and available in red, green, orange and yellow-green emitting colors. The standard unit is constructed with black face and milky white segment color.

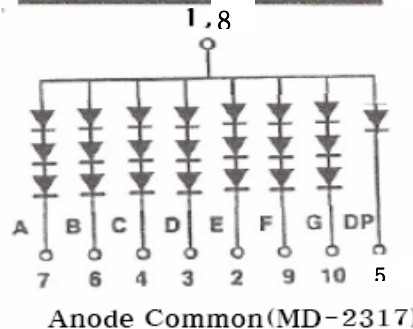
### PACKAGE DIMENSIONS



### ACTUAL SIZE



Cathode Common (MD-2310)



Anode Common (MD-2317)

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## ◆ Ultra Red MD-UR2310/2310 (AlGaAs/GaAs)

### Absolute Maximum Ratings (Ta=25°C)

Power dissipation/total	880	mW
Power dissipation/seg	120	mW
Forward current	20	mA
Peak forward current	60	mA
Reverse voltage	15	V
Operating temperature	-25~+85	°C
Storage temperature	-55~+100	°C

### Electrical/Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward voltage/seg	Vf	If=10mA	-	5.4	6	V
Reverse current/seg	Ir	Vr=15V	-	-	10	μA
Luminous intensity/digit	Iv	If=10mA	800	2500	-	μcd
Peak wave length	λp	If=10mA	-	660	-	nm
Spectral line half width	Δλ	If=10mA	-	20	-	nm

\* Vf of Dot (Typ : 1.8V, Max 6V)

## ◆ Ultra Green MD-UG2310/2317 (AlGaInP/GaP)

### Absolute Maximum Ratings (Ta=25°C)

Power dissipation/total	1048	mW
Power dissipation/seg	144	mW
Forward current	20	mA
Peak forward current	60	mA
Reverse voltage	15	V
Operating temperature	-25~+85	°C
Storage temperature	-55~+100	°C

### Electrical/Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward voltage/seg	Vf	If=10mA	-	6	7.2	V
Reverse current/seg	Ir	Vr=15V	-	-	10	μA
Luminous intensity/digit	Iv	If=10mA	700	1500	-	μcd
Peak wave length	λp	If=10mA	569	570	575	nm
Spectral line half width	Δλ	If=10mA	-	30	-	nm

\* Vf of Dot (Typ : 2V, Max 2.4V)

## ◆ Super Red MD-SR2310/2310 (AlGaAs/GaAs)

### Absolute Maximum Ratings (Ta=25°C)

Power dissipation/total	880	mW
Power dissipation/seg	120	mW
Forward current	20	mA
Peak forward current	60	mA
Reverse voltage	15	V
Operating temperature	-25~+85	°C
Storage temperature	-55~+100	°C

### Electrical/Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward voltage/seg	Vf	If=10mA	-	5.4	6	V
Reverse current/seg	Ir	Vr=15V	-	-	10	μA
Luminous intensity/digit	Iv	If=10mA	800	1500	-	μcd
Peak wave length	λp	If=10mA	-	660	-	nm
Spectral line half width	Δλ	If=10mA	-	20	-	nm

\* Vf of Dot (Typ : 1.8V, Max 6V)

## ◆ Green MD-G2310/2317 (GaP)

### Absolute Maximum Ratings (Ta=25°C)

Power dissipation/total	1048	mW
Power dissipation/seg	144	mW
Forward current	20	mA
Peak forward current	60	mA
Reverse voltage	15	V
Operating temperature	-25~+85	°C
Storage temperature	-55~+100	°C

### Electrical/Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward voltage/seg	Vf	If=10mA	-	6	7.2	V
Reverse current/seg	Ir	Vr=15V	-	-	10	μA
Luminous intensity/digit	Iv	If=10mA	-	1300	-	μcd
Peak wave length	λp	If=10mA	-	570	573	nm
Spectral line half width	Δλ	If=10mA	-	30	-	nm

\* Vf of Dot (Typ : 2V, Max 2.4V)

### ◆ Pulse Width - 1ms

Duty Cycle - 1/5