



SPECIFICATION FOR APPROVAL

COMPANY NAME:

DATE: **2014/5/23**

MODEL NO: **BD3-401DR-A221**

CUSTOMER PART NO:

REV: **01**

Spark LED			CUSTOMER
Prepare by	Checked by	Approved by	
ChenFok			
NOTE:			

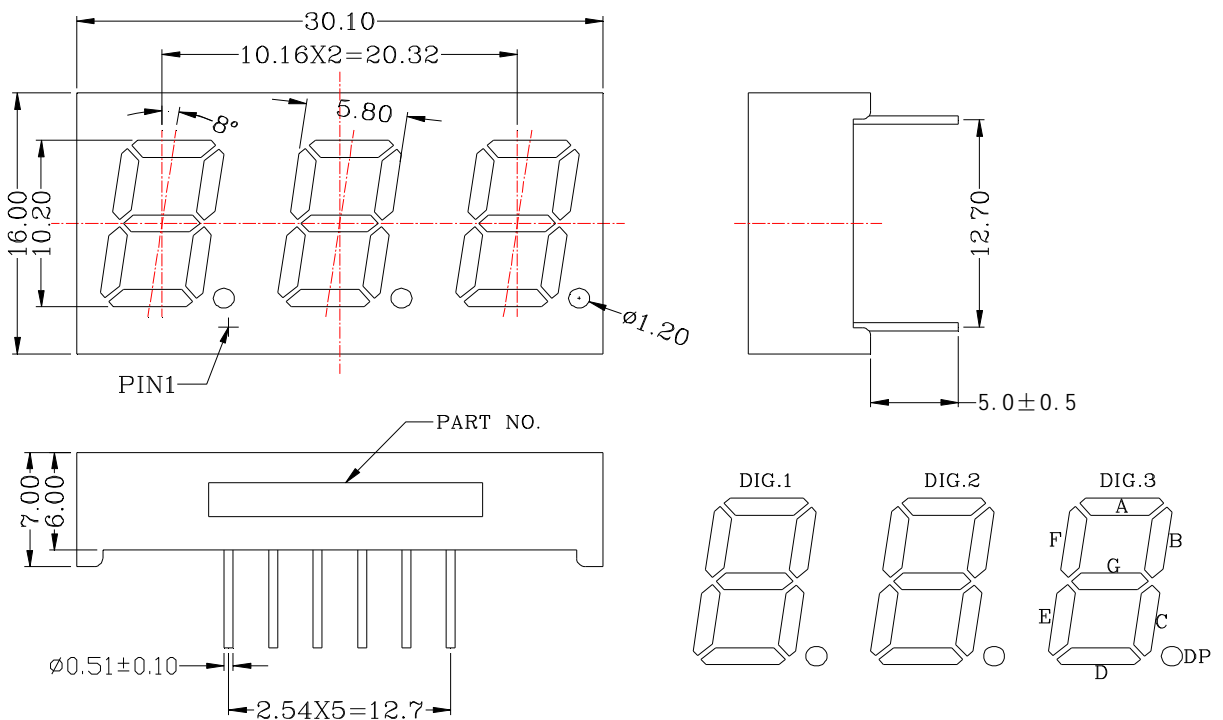
n Features:

- I High Reliability
- I Color: Red (AlInGaP) Digit
- I Low Power Requirement
- I Easy Assembly

n Description:

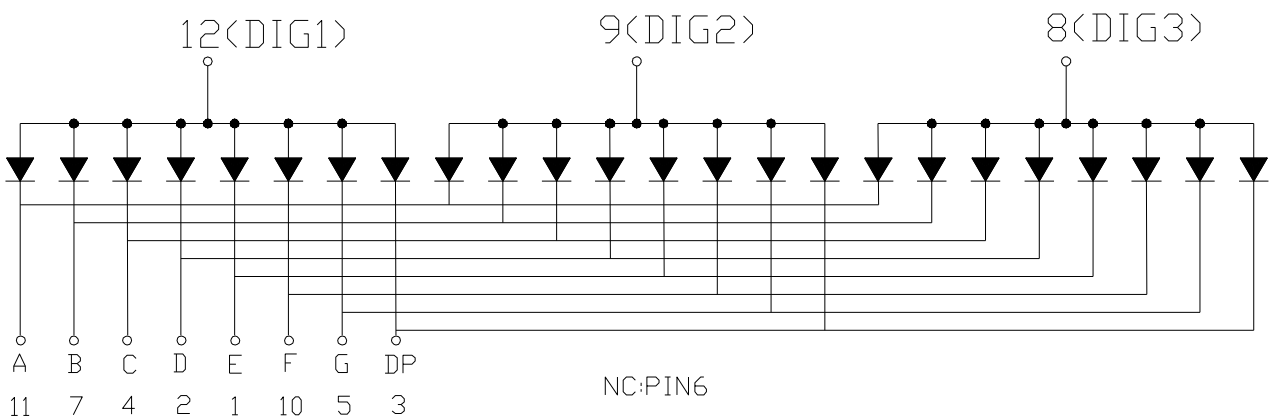
- I Digit Height: 10.2mm(0.40")
- I Emitting Color: Red
- I Gray Face and White Epoxy
- I The material and finish of lead terminals is Fe(plating with 100% Sn)

n Outer Dimension:



Notes: Unless otherwise stated, The tolerance is ± 0.25 mm.

n Circuit Diagram:



Pin Connection:

PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Cathode E	7	Cathode B
2	Cathode D	8	Common Anode DIG3
3	Cathode DP	9	Common Anode DIG2
4	Cathode C	10	Cathode F
5	Cathode G	11	Cathode A
6	N C	12	Common Anode DIG1

Absolute Maximum Rating (Ta=25°C):

Parameter	Symbol	Condition	Color	Rating	Unit
Power Dissipation Per Segment	P_d	—	Red	57.5	mW
Forward Current Per Segment	I_F	—	Red	25	mA
Derating Of If Per Segment	ΔI_F	$T_a \geq 25^\circ\text{C}$	Red	0.30	mA/°C
Peak Forward Current Per Segment	I_{FP}	1/10 Duty 10KHz	Red	100	mA
Reverse Voltage Per Segment	V_R	—	Red	5	V
Operating Temperature Range	T_{opr}	—	—	-35~+85	°C
Storage Temperature Range	T_{stg}	—	—	-35~+85	°C

Electrical/Optical Characteristics Rating(Ta=25°C):

Item	Symbol	Test conditions	Location	Color	Rating			Unit
					Min.	Typ.	Max.	
Forward Voltage	V_F	$I_F=20\text{mA}$	Per Segment	Red	—	1.95	2.3	V
Reverse Current	I_R	$V_R=5\text{V}$	Per Segment	Red	—	—	100	μA
Luminous Intensity	I_V	$I_F=10\text{mA}$	Per Segment	Red	5051	10000	—	μcd
Wavelength	λ_P	$I_F=20\text{mA}$	Per Segment	Red	—	660	—	nm
	λ_D					640		
Spectral Line Half Width	$\Delta\lambda$	$I_F=20\text{mA}$	Per Segment	Red	—	20	—	nm
Luminous Intensity Matching Ratio (Segment to segment)	I_{v-m}	$I_F=10\text{mA}$	—	—	—	—	2:1	

Luminous Intensity Sorting:(Luminous Intensity Tolerance is +/-10%)

Rank	Symbol	Condition	Min	Max	Unit
K	K	$I_F=10\text{mA}$	5051	8000	μcd
L	L	$I_F=10\text{mA}$	8001	12650	μcd
M	M	$I_F=10\text{mA}$	12651	19990	μcd

■ Soldering Conditions:

Hand soldering	295°C ± 5°C in 3 seconds
Dip soldering	260°C ± 5°C in 5 seconds
Automatic soldering	70°C ~ 80°C in 30 seconds soldering 245°C ± 5°C in 5 seconds

■ Modification Record

Rev.	Description Of Change	Requested	Date
01	1st preliminary specification	Customer	2013/8/6