TAIWAN OASIS

Http://www.taiwanoasis.com.tw

Technical Data

10.0mm (0.39") 7 Segment Display

TOS-3191X Single Digit
TOS-3192X Single Digit
TOD-3291X Dual Digit
TOD-3292X Dual Digit
TOF-3491X Four Digit
TOF-3492X Four Digit

Features

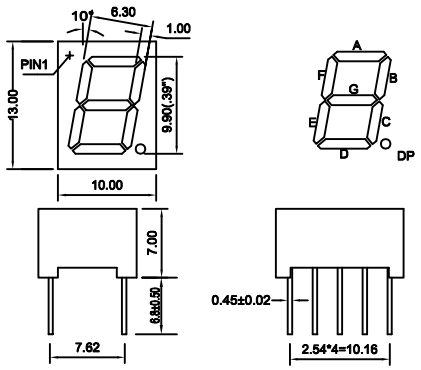
*(0.39")10.0mm DIGIT HEIGHT
* CONTINUOUS UNIFORM SEGMENTS
* LOW POWER REQUIREMENT
* LOW CURRENT APPLICATION
* EXCELLENT CHARACTER APPEARANCE
* HIGH BRIGHTNESS & HIGH CONTRAST
* WIDE VIEWING ANGLE
* SOLID STATE RELIABILITY
* RoHS COMPLIANT
* Pb FREE
* GRAY/BLACK FACE AVAILABLE

Absolute Maximum Rating

Series	Emitting color	Pd (mW)	If (mA)	IFP (mA)	VR (V)	Top (℃)	Tst (℃)	Tsol*2 (℃)	VF			λp	IV	
									IF (mA)	typ (V)	max (V)	typ (nm)	IF (mA)	typ (ucd)
0.39"	H	60	25	80	5	-25 ~ +85	-30 ~ +85	260/3Sec	20	1.8	2.0	660	10	1092
	S	60	25					260/3Sec	20	1.8	2.0	660	10	1530
	K	60	25					260/3Sec	20	1.8	2.0	648	10	1092

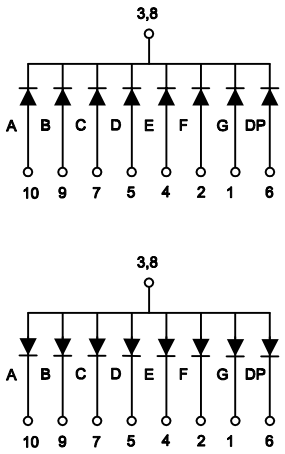
*1.Condition for IFP is pulse of 1 / 10 duty and 0.1 msec width.
*2. Pb Free Process.
*3. In the absence of confirmation by device specification sheets,OASIS takes no responsibility for any defects that may occur in equipment using any OASIS devices shown in catalogs, data books,etc. Contact OASIS in order to obtain the latest device specification sheets before using any OASIS devices.
*4. Specifictions are subject to change without notice for improvement.

PACKAGE DIMENSIONS

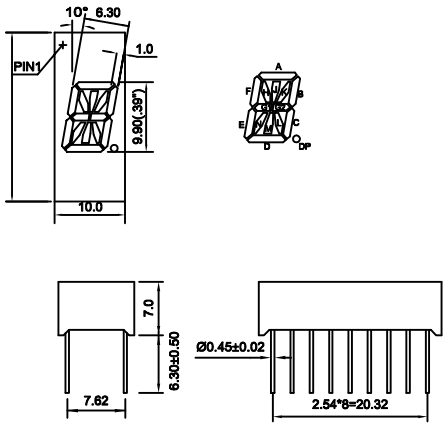


NORMAL TOLERANCE:±0.25 ANGLE:±1°

INTERNAL CIRCUIT DIAGRAM

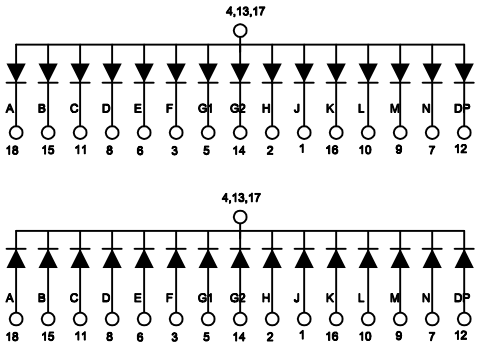


PACKAGE DIMENSIONS

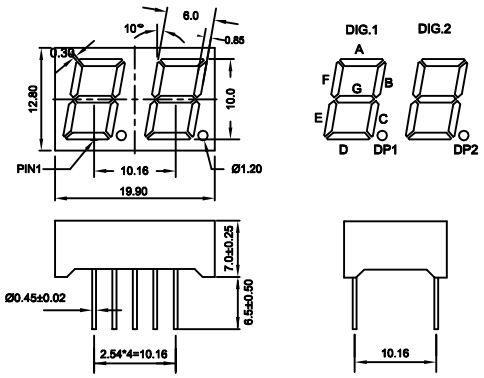


NORMAL TOLERANCE:±0.25 ANGLE:±1°

INTERNAL CIRCUIT DIAGRAM

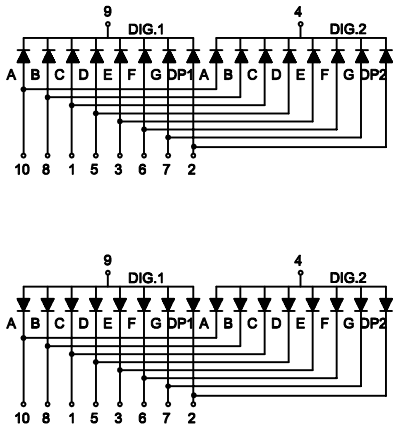


PACKAGE DIMENSIONS

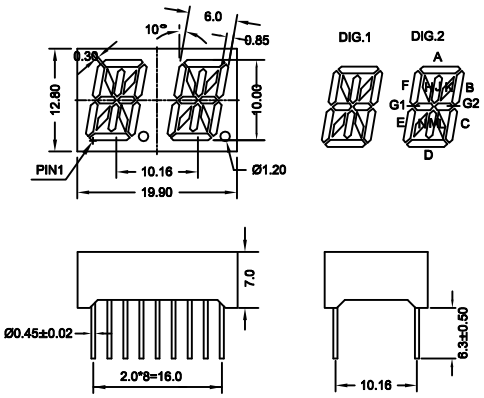


NORMAL TOLERANCE:±0.25 ANGLE:±1°

INTERNAL CIRCUIT DIAGRAM

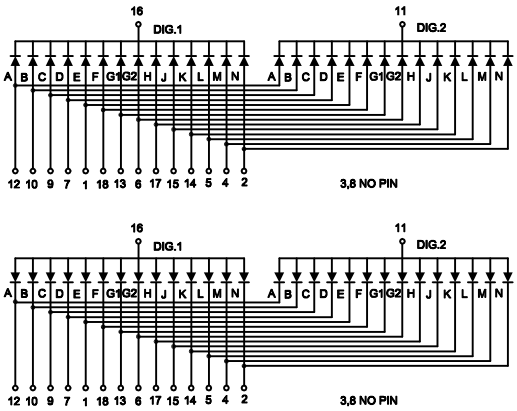


PACKAGE DIMENSIONS

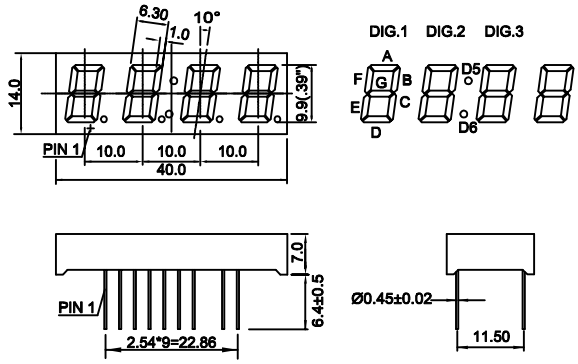


NORMAL TOLERANCE:±0.25 ANGLE:±1°

INTERNAL CIRCUIT DIAGRAM

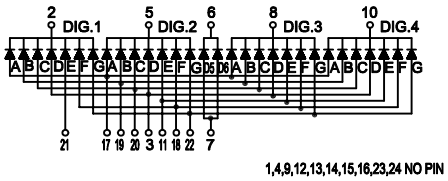


PACKAGE DIMENSIONS

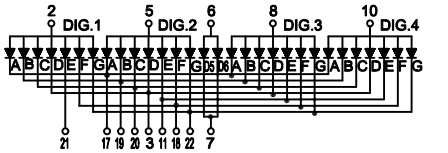


NORMAL TOLERANCE:±0.25 ANGLE:±1°

INTERNAL CIRCUIT DIAGRAM

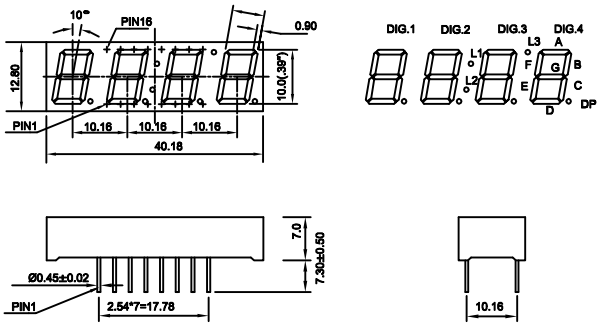


1,4,9,12,13,14,15,16,23,24 NO PIN



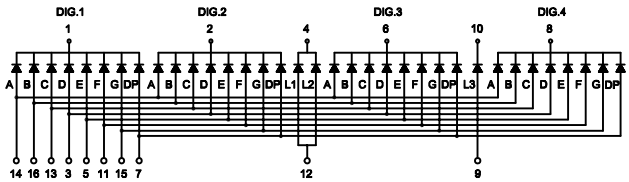
1,4,9,12,13,14,15,16,23,24 NO PIN

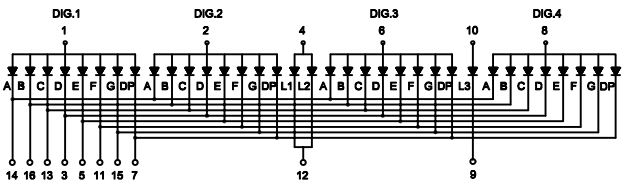
PACKAGE DIMENSIONS



NORMAL TOLERANCE:±0.25 ANGLE:±1°

INTERNAL CIRCUIT DIAGRAM





Chip Material

H(Hi-red): GaAlAs/GaAs

S(Super-red): GaAlAs/GaAs

K(Hi-Orange): GaAlAs/GaAs

ABSOLUTE MAXIMUN RATING :(TA=25°C)

SYMBOL	PARAMETER	VALUE			UNITS
		H	S	K	
Pd	Power Dissipation Per Segment	60			mW
IFP	Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width)	80			mA
IFM	Continuous Forward Current Per Segment	25			mA
TOP	Reverse Voltage Per Segment	5			V
TST	Operating Temperature Range	-25 to +85			°C
VR	Storage Temperature Range	-30 to +85			°C
Lead Solder Temperature(1/16 Inch Below Seating Plane)		260°C for 3 sec.			

ELECTRICAL/OPTICAL CHARACTERISTICS AT TA=25°C

SYMBOL	PARAMETER	TEST CONDITION		MIN.	TYP.	MAX.	UNITS
Iv	Luminous Intensity Per Segment	IF=2mA	H		1092		µcd
			S		1530		µcd
			K		1092		µcd
λ_p	Peak Emission Wavelength	IF=20mA	H		660		nm
			S		660		nm
			K		648		nm
λ_d	Domiant Emission Wavelength	IF=20mA	H		643		nm
			S		640		nm
			K		635		nm
$\triangle\lambda$	Spectral Line Half-Width	IF=20mA			20		nm
VF	Forward Voltage Per Segment	IF=2mA			1.65		V
IR	Reverse Current Per Segment	VR=5V		10			µA
Iv-m	Luminous Intensity Matching Rate	IF=20mA		1.5:1			

* In the absence of confirmation by device specification sheets,OASIS takes no responsibility for any defects that may occur in equipment using any OASIS devices shown in catalogs, data books,etc. Contact OASIS in order to obtain the latest device specification sheets before using any OASIS devices.

*Specifictions are subject to change without notice for improvement.

TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES

Remark:

Dice code	①H	②S	③K
Lighting color	Hi-Red	Super-Red	Hi-Orange

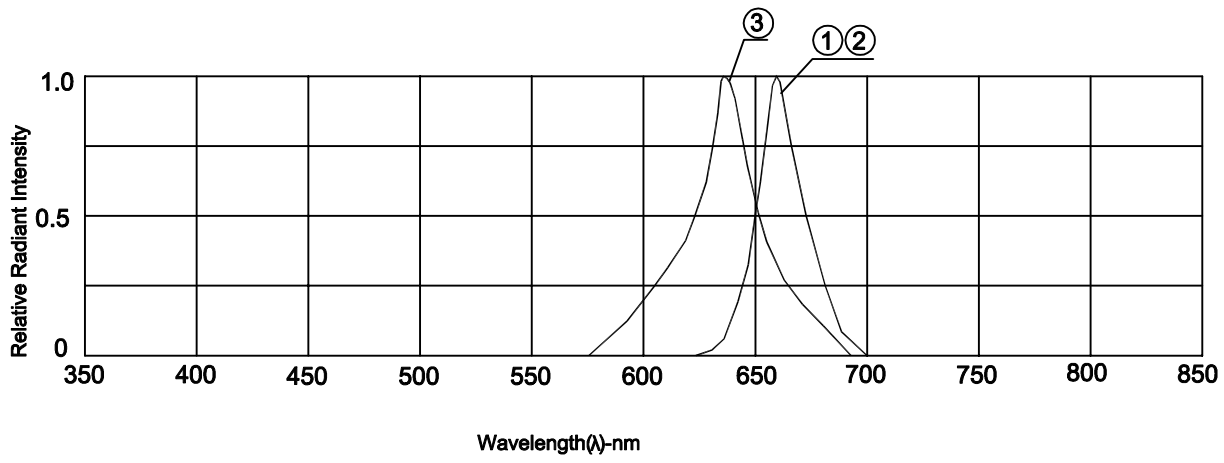


Fig1.RELATIVE INTENSITY VS. WAVELENGTH

TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES

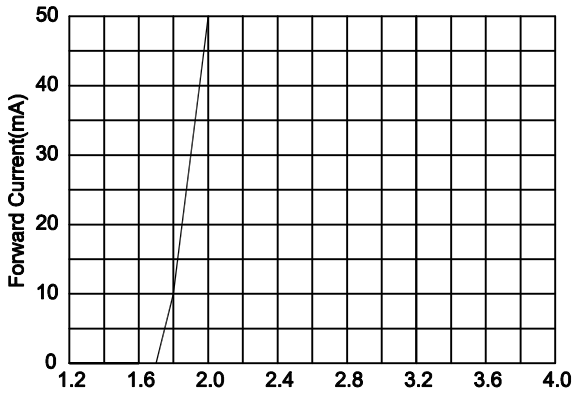


Fig2. FORWARD CURRENT VS.
FORWARD VOLTAGE

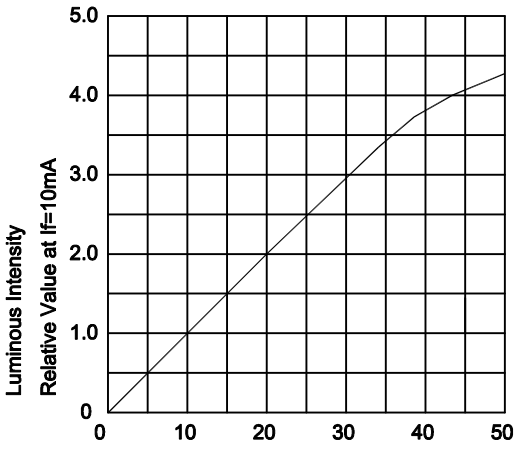


Fig3. RELATIVE LUMINOUS INTENSITY
VS. FORWARD CURRENT

TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES

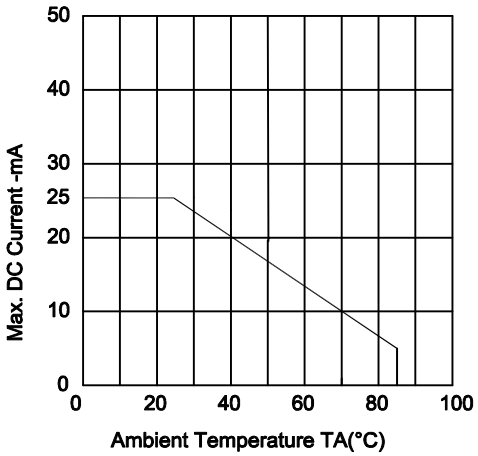


Fig4 MAX. ALLOWABLE DC CURRENT
VS.AMBIENT TEMPERATURE.

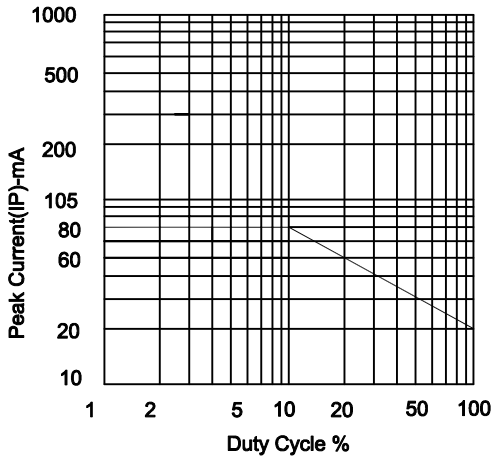


Fig5. MAX. PEAK CURRENT VS.
DUTY CYCLE %
(REFRESH RATE 1KHz)