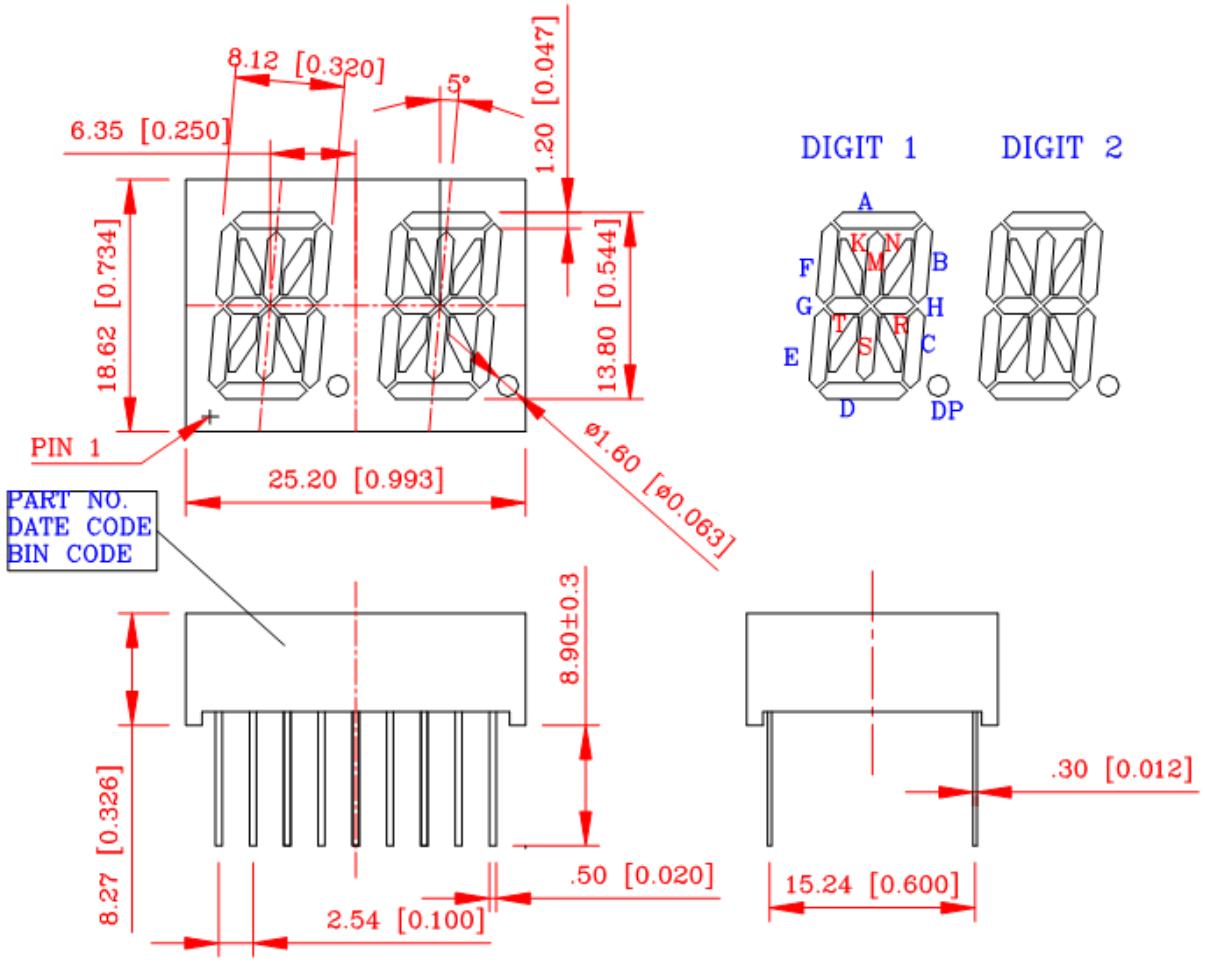
SPECIFICATIONS CDDAN54B2W-CEE

OUTLINES DIMENSIONS



Notes:
1. All Dimensions are in millimeters (inches).
2. Tolerance is ± 0.25mm (0.01”) unless otherwise noted.
3. Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Description
CDDAN54B2W-CEE	InGaN	Blue	White Segment	Common Anode

ABSOLUTE MAXIMUM RATINGS (TA=25°C)

Parameter	Symbol	Max Rating	Unit
Power Dissipation	P_D	355	mW
Input Voltage	V_I	12	V
Supply Voltage	V_{DD}	12	V
Supply Current	I_{DD}	8.5	mA
Operating Temperature Range	T_{OPR}	-20~+60	°C
Storage Temperature Range	T_{STG}	-20~+60	°C
Soldering Condition: 260 °C/ 3sec			

OPTICAL-ELECTRICAL CHARACTERISTICS (TA=25°C)

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	I_V	I_B = 0.4mA	3.4	8.5	-	mcd
Reverse Leakage Current	I_R	V_R = 5V	-	-	10	μA
Dominant Wavelength	λ_D	I_F = 20mA	-	470	-	nm
Spectral Radiation Bandwidth	$\Delta\lambda$	I_B = 0.4mA	-	30	-	nm

RoHS Compliant Lead Free

ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: www.chromeled.com

ELECTRICAL CONNECTION

PIN CONNECTION

PIN	CONNECTION	PIN	CONNECTION
1	BIT 32 OUTPUT	10	NO PIN
2	BIT 33 OUTPUT	11	NO PIN
3	BIT 34 OUTPUT	12	NO PIN
4	DATA INPUT	13	V_{SS}*1
5	CLOCK INPUT	14	V_{SS}*1
6	DATA ENABLE	15	NO PIN
7	V_{DD}	16	NO PIN
8	V_{LED}	17	BIT 31 OUTPUT
9	Brt CONTROL	18	NO PIN

TABLE I SERIAL DATA INPUT SEQUENCE

BIT	DIGIT	SEGMENT	BIT	DIGIT	SEGMENT
1	2	A	18	1	D
2	2	B	19	1	E
3	2	C	20	1	F
4	2	D	21	1	G
5	2	E	22	1	H
6	2	F	23	1	K
7	2	G	24	1	M
8	2	H	25	1	N
9	2	K	26	1	R
10	2	M	27	1	S
11	2	N	28	1	T
12	2	R	29	1	DP
13	2	S	30	2	DP
14	2	T	31		PIN 17
15	1	A	32		PIN 1
16	1	B	33		PIN 2
17	1	C	34		PIN 3

RECOMMENDED OPERATION CONDITIONS (TA=25°C)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Supply Voltage	V_{DD}	4.75		11	V	V
Input Voltage	V_I					
Logical "0" Level		-0.3		0.8	V	A10μA Input Bias
Logical "1" Level		2.2		V_{DD}	V	$4.75<V_{DD}<5.25V$
Logical "2" Level		V_{DD}-2		V_{DD}	V	$V_{DD}>5.25V$
Brightness Input Current	I_B	0		0.75	mA	
Brightness Input Voltage	V_B	3		4.3	V	Input Current=750μA
Off State Voltage	Vo(off)			11	V	
Output Sink Current						
Segment Off				10	μA	I_B=0μA
Segment On			3		mA	I_B=100μA
			6		mA	I_B=200μA
Input Clock Frequency	F_{CLOCK}	0		0.5	MHZ	
Output Matching	Io			A20	%	

ELECTRICAL DIAGRAM

Internal Block Diagram

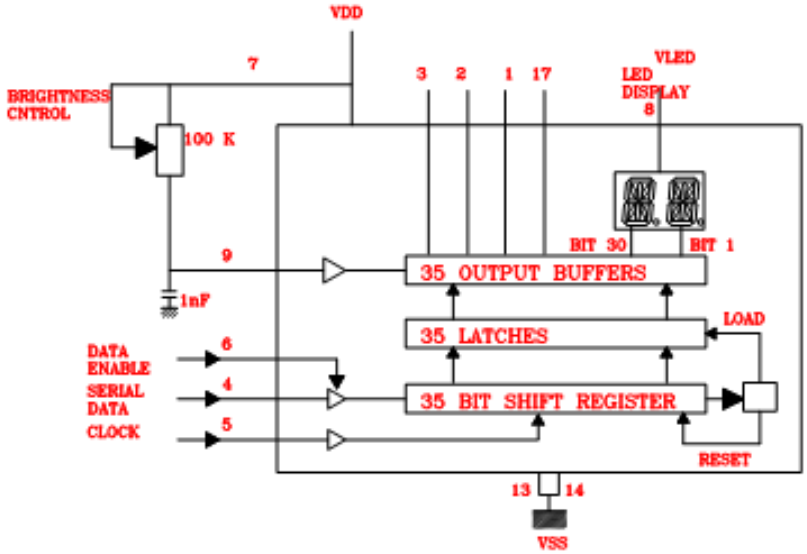


Figure 2

Input Data Format

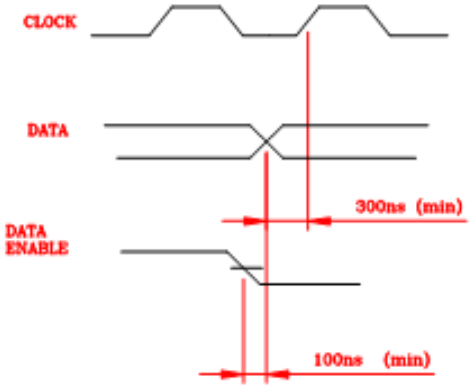


Figure 3

Timing Relationship

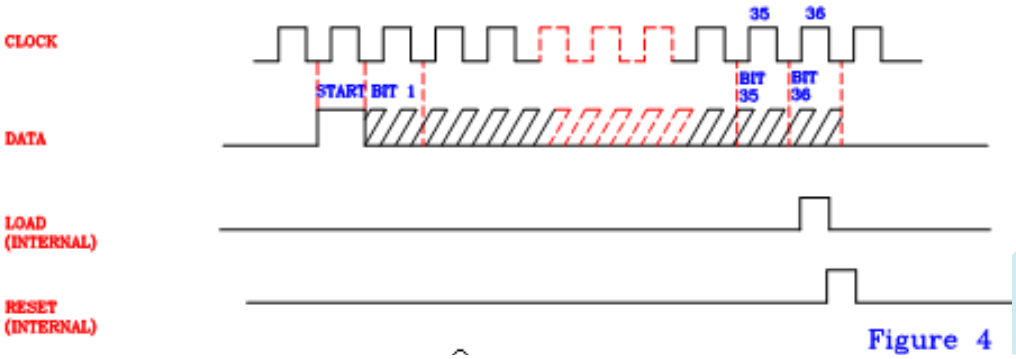


Figure 4

OPTICAL CHARACTERISTICS CURVES (TA=25°C)

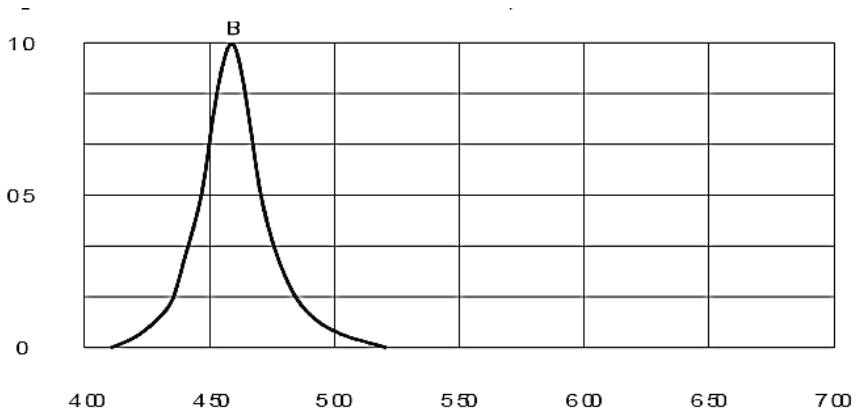
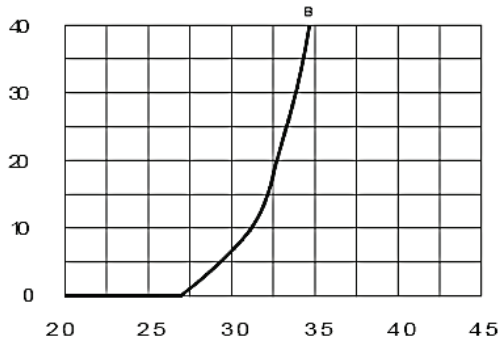
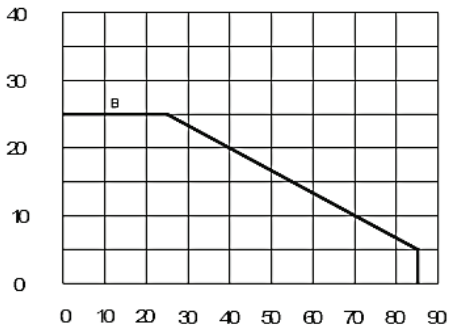


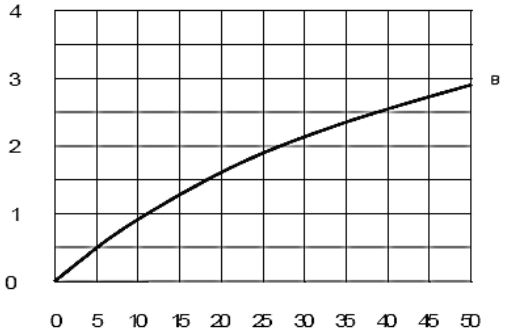
FIG1.RELATIVE LUMINOUS INTENSITY
VS.WAVELENGTH



Forward Voltage(V)
FIG.2 FORWARD Current
VS.Forward Voltage



Ambient Temperature(°C)
FIG.3 ALLOWABLE DC CURRENT
VS.AMBIENT TEMPERATURE



Forward Current(mA)
FIG.4 Relative Intensity
VS.FORWARD Current