

SMART SOLUTIONS

BY: **LUMEX**
INC.

Customer's Problem *Our Opportunity*

The customer wanted an arc shaped, multi window indicator for a speedometer which would, in two colors, visually display the relative speed and distance the vehicle was traveling. Using individual LEDs was expensive and labor intensive.



Permanent Solution

Sustainable Relationship with Customer

Lumex tooled a custom reflector with 8 arc shaped windows, a Chips-on-Board display with a curved reflector, 8 windows and two curved rows.

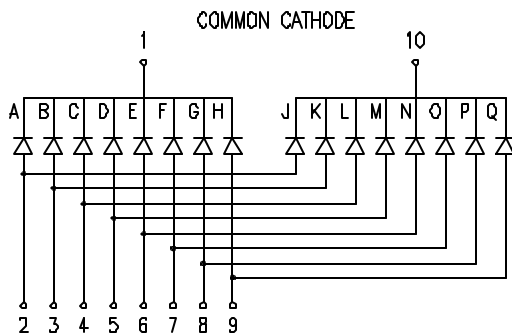
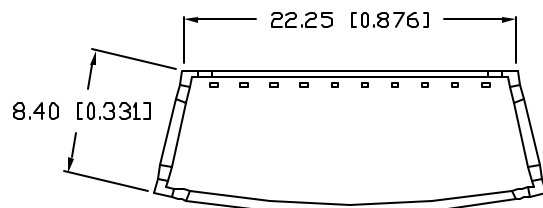
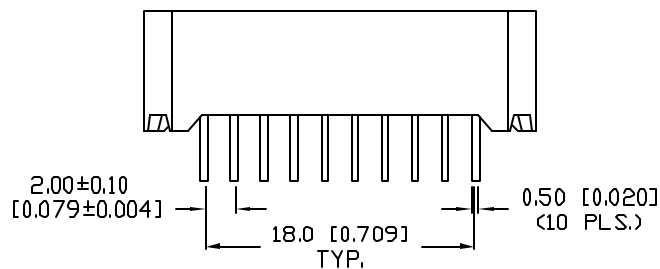
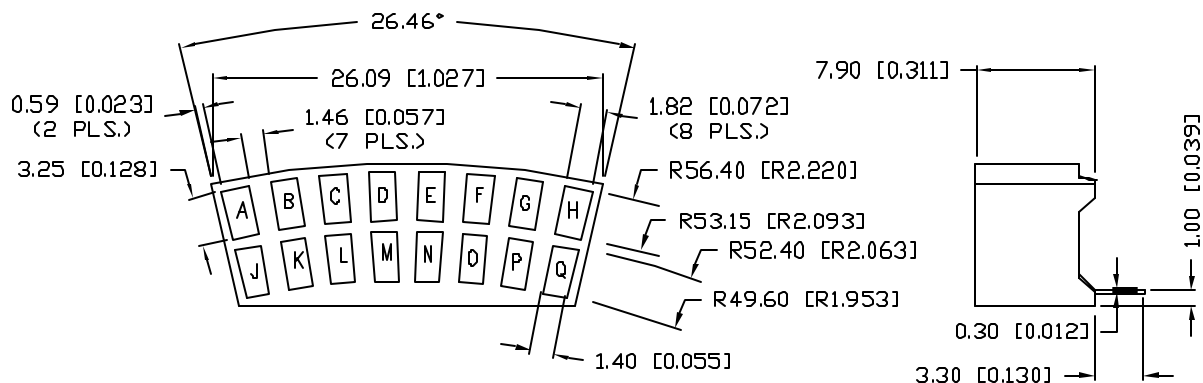
Benefit to Customer

Resolved alignment problems and height off board inconsistencies. Reduced the number of traces on PCB. Reduced installed parts from 208 discrete LEDs to 13 units thereby eliminating the need for labor intensive and costly discrete LEDs. Saved Big Bucks!

Click here for:
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Solution
Part Number
SSA-LXB1618Y8W
Available
Now

UNCONTROLLED DOCUMENT



PART NUMBER		REV.
SSA-LXB1618Y8W		C
REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #11013.	7.11.03
B	E.C.N. #11032.	9.4.03
C	E.C.N. #11034.	9.18.03

ELECTRO-OPTICAL CHARACTERISTICS $T_A=25^\circ\text{C}$ $I_f=20\text{mA}$

PARAMETER	RED	YELLOW	UNITS	TEST COND
PEAK WAVELENGTH	635	585	nm	
FORWARD VOLTAGE (TYP.)	2.0	2.1	V_f	
FORWARD VOLTAGE (MAX.)	2.5	2.5	V_f	
REVERSE VOLTAGE	5.0	5.0	V_r	$I_r=100\mu\text{A}$
AXIAL INTENSITY	8	8	mcd	$I_f=20\text{mA}$
VIEWING ANGLE	180	180	2θ	
LED POSITION:	A~H	J~Q		
EPOXY LENS FINISH:	MILKY WHITE DIFFUSED			
FACE COLOR:	BLACK			

LIMITS OF SAFE OPERATION AT 25°C PER CHIP

PARAMETER	COLORS	MAX	UNITS
PEAK FORWARD CURRENT*		150	mA
STEADY CURRENT		30	mA
POWER DISSIPATION		105	mW
DERATE FROM 25°C		1.2	mW/°C
OPERATING, STORAGE TEMP.		-40 TO +85	°C
SOLDERING TEMP.		+260	°C
2.0mm FROM BODY			3 SEC. MAX

* $t < 10\mu\text{s}$

NOTES:

1. LUMEX PART NUMBER TO BE STAMPED ON THE SIDE OF THE REFLECTOR.
2. REFLECTOR MATERIAL: WHITE NYLON.
3. PARTS TO PACKED IN ANTI-STATIC TUBES.
4. FACE COLOR IS BLACK.

UNCONTROLLED DOCUMENT

*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030), MIN.=^{+DECIMAL PRECISION}-0.00 ^{MAX.=+0.00}-DECIMAL PRECISION

REV. C	PART NUMBER SSA-LXB1618Y8W	<p>CONFIDENTIAL INFORMATION</p> <p>THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC, THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES.</p> <p>RELIABILITY NOTE</p> <p>OUR MANY YEARS OF EXPERIENCE DATA ACCUMULATION INDICATE THAT SOLDER HEAT IS A MAJOR CAUSE OF EARLY AND FUTURE FAILURE. PLEASE PAY ATTENTION TO YOUR SOLDERING PROCESS.</p>	<p>290 E. HELEN ROAD PALATINE, IL 60067-6976 PHONE: +1.847.359.2790 US WEB: www.lumex.com TW WEB: www.lumex.com.tw</p>
<p>16 SEGMENT, CURVED LED ARRAY, 8 635nm RED CHIPS, 8 565nm YELLOW CHIPS, WHITE SEGMENTS, BLACK FACE, COMMON CATHODE.</p>		<p>DRAWN BY: BC</p>	<p>CHECKED BY:</p> <p>APPROVED BY:</p> <p>DATE: 4.15.03 PAGE: 1 OF 1 SCALE: N/A</p>