Endicott Research Group, Inc.
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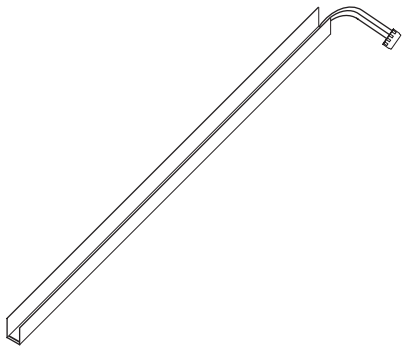
SFR3703

Specifications and Applications Information

11/25/08 Preliminary

Smart Force LED Backlight Unit

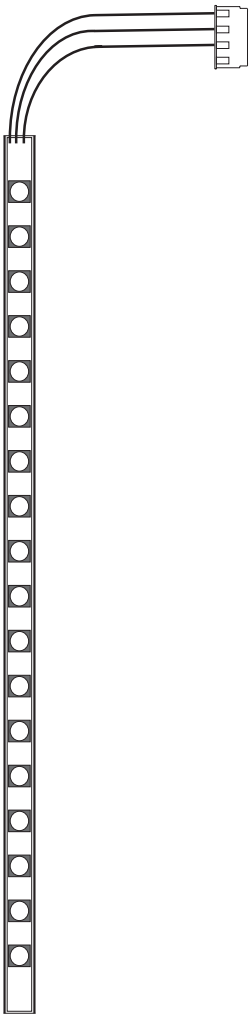


The ERG **Smart Force Series** of LED backlight units are specifically designed for applications which require wide dimming and LCD brightness stability. The SFR3703 is designed to provide backlighting for the Sharp LQ064V3DG01 display.

Designed, manufactured and supported within the USA, the SFR features:

- ✓ Custom rails for specific LCDs
- ✓ High dimming ratio
- ✓ One year warranty

Package Configuration



Components are shown for reference only. Actual product may differ from that shown.

Connector
Input Connector
Molex 51021-0400
J1-1 Cathode 1 J1-2 Anode 1 J1-3 Cathode 2 J1-4 Anode 2

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Absolute Maximum Ratings (1)

Rating	Symbol	Value	Units
Forward Current (2)	I_F	150	mA
Pulse Forward Current (2) (3)	I_P	300	mA
Component Surface Temperature	Ts	-40 to +130	°C
Storage Temperature	Tstg	-40 to +80	°C

Maximum Recommended Operating Conditions

Rating	Symbol	Value	Units
Forward Current (4) (5)	I_F	100	mA
Pulse Forward Current	I_P	200	mA
Component Surface (5) Temperature	Ts	-40 to +100	°C

Electrical Characteristics

Unless otherwise noted Vin = 48.00 Volts dc and Ta = 25°C

Characteristic	Symbol	Min	Typ	Max	Units
Number of Strings	-	-	2	-	-
LED Forward Voltage	V_F	-	2.9	3.2	V
String voltage	V_S	-	26.0	28.8	V

Specifications subject to change without notice.

(1) Operation above maximum recommended operating conditions will require thermal management actions and will decrease LED lifetime.
(2) Current is specified per string.
(3) Maximum duty cycle is 50% for pulsed current drive at 200mA, pulse width <= 10ms.
(4) Strings are to be driven with a current source.
(5) Operation at or below the maximum recommended component surface temperature and forward current rating allows presumption of a 60,000 hour LED lifetime. (Lifetime is time to 70% Lumen maintenance)

Made in USA

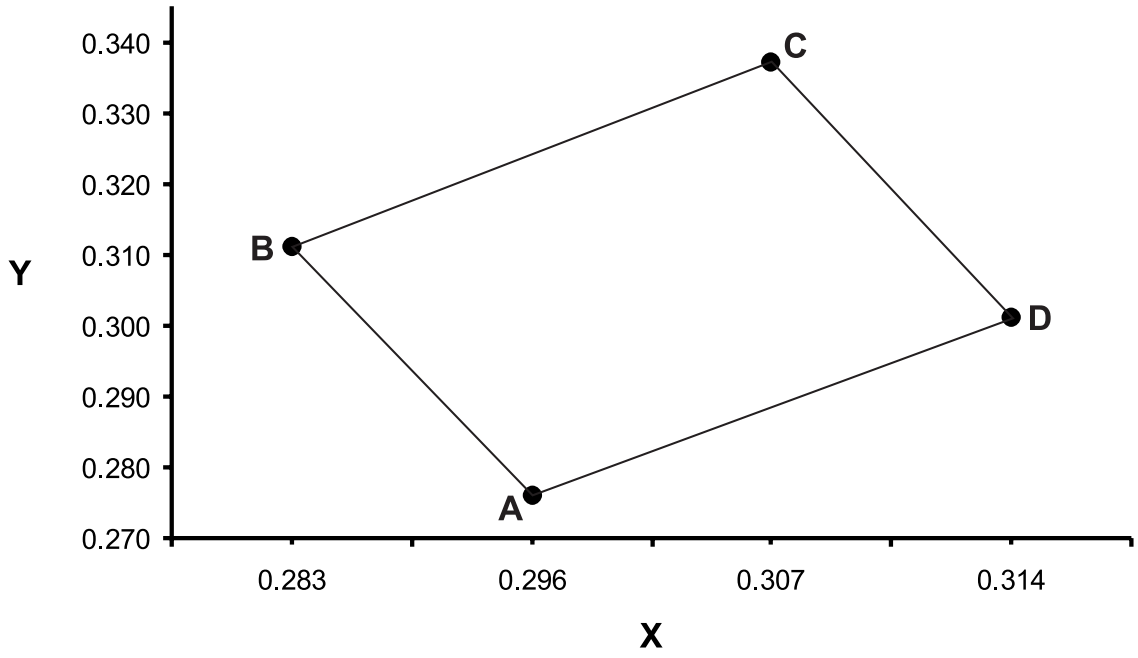
Backlight Chromaticity Coordinate Boundaries (1)

(Ta = 25°C)

	A	B	C	D
X	0.296	0.283	0.307	0.314
Y	0.276	0.311	0.337	0.301

(1) Each column (A, B, C and D) represents an X,Y coordinate on the CIE 1931 chromaticity diagram.

CIE 1931 CHROMATICITY DIAGRAM



Made in USA

J1, pins:

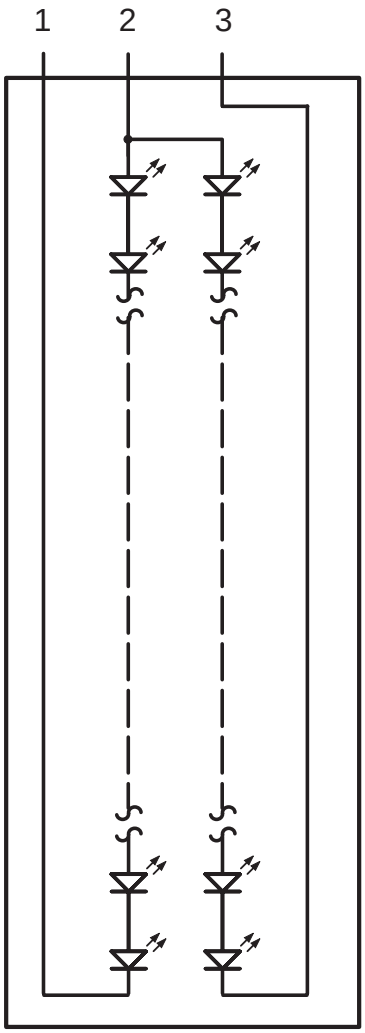


Figure 1

SFR Connectivity