



Endicott Research Group, Inc.

2601 Wayne St., Endicott, NY 13760  
607-754-9187 Fax 607-754-9255  
http://www.ergpower.com

## Specifications and Applications Information

07/24/07

Preliminary

The ERG **Smart Force Series** of LED backlight units are specifically designed for applications which require wide dimming and LCD brightness stability. The SFR3656 is designed to provide backlighting for the Sharp LQ104V1DG51 display.

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

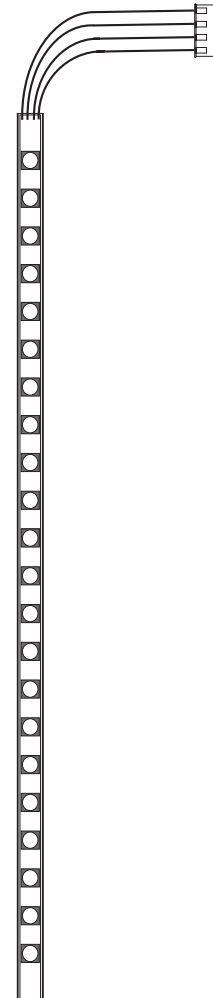
- ✓ Custom rails for specific LCDs
- ✓ High dimming ratio
- ✓ One year warranty

# SFR3656

## Smart Force LED Backlight Unit



Package Configuration

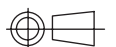


Components are shown for reference only. Actual product may differ from that shown.

### Connector Input Connector

Molex  
51021-0400

J1-1 Cathode 1  
J1-2 Anode 1  
J1-3 Cathode 2  
J1-4 Anode 2



**Absolute Maximum Ratings**

Rating	Symbol	Value	Units
Forward Current <sup>(1)</sup>	$I_F$	100	mA
Pulse Forward Current <sup>(1) (2)</sup>	$I_P$	200	mA
Component Surface Temperature	$T_s$	-20 to +80	°C
Storage Temperature	$T_{stg}$	-40 to +80	°C

**Recommended Operating Conditions**

Rating	Symbol	Value	Units
Forward Current <sup>(3) (4)</sup>	$I_F$	75	mA

**Electrical Characteristics**

Unless otherwise noted  $V_{in} = 48.00$  Volts dc and  $T_a = 25^\circ\text{C}$

Characteristic	Symbol	Min	Typ	Max	Units
Number of Strings	-	-	2	-	-
LED Forward Voltage	$V_F$	-	2.9	3.2	V
String voltage	$V_S$	-	32.0	35.3	V

Specifications subject to change without notice.

- (1) Current is specified per string.
- (2) Maximum duty cycle is 50% for pulsed current drive at 200mA, pulse width  $\leq 10$ ms.
- (3) Forward current for screen brightness of  $420 \text{ cd/m}^2$  on a Sharp LQ104V1DG51 display.
- (4) Strings are to be driven with a current source.

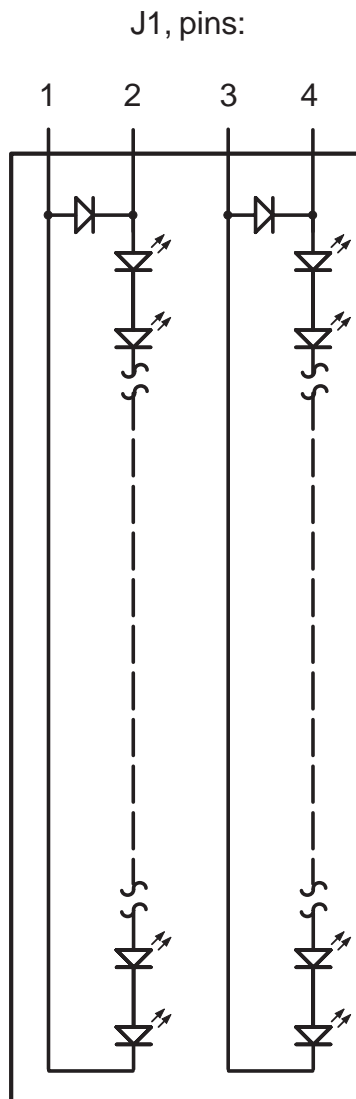


Figure 1  
SFR Connectivity