Applied Concepts
INNOVATION IN POWER CONVERSION TECHNOLOGY

397 Route 281
Tully, New York 13159-1175
Phone: 315 696-6676
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ACR-3041

14.20" DUAL MODE LED RAIL

(Day LEDs: Tri-Bank, 89V @ 70mA)
(NVIS LEDs: Dual Bank, 81V @ 15mA)

10/14/2020

GENERAL DESCRIPTION

The ACR-3041 is designed as a replacement for edge lit 15.6" LED displays.

The rail uses high performance LEDs capable of Day and NVIS White operation.

The rail requires the use of a constant current source to properly drive the LED's.

The LED rail is compatible with any of ACI's I-Drive series of LED Drivers.

MECHANICAL / ENVIRONMENTAL

Weight = 7 grams

Altitude = 35,000 Ft maximum

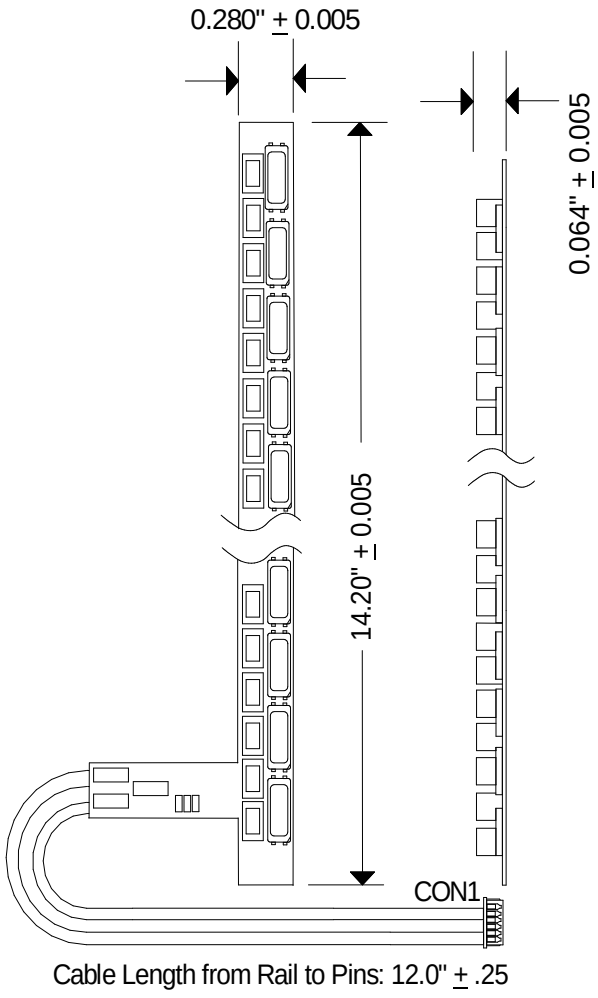
Humidity < 95% non-condensing

Size (L x W x H) = 14.20 IN x 0.280 IN x .064 IN

Flex Foil Thickness = 0.007 IN

Input connector = CON1

RoHS compliant



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DAY MODE

MAXIMUM RATINGS

10/14/2020

Symbol	Parameter	Value	Unit
Tled	Operating temperature of LED edge light (light rail contact)	-30 to +85	Deg-C
Tstg	LED Rail storage temperature	-40 to +100	Deg-C
Ifwd	Maximum LED forward current (DC)	84	mA

LED OPTICAL CHARACTERISTICS

LED Manufacturer specifications for reference purpose only

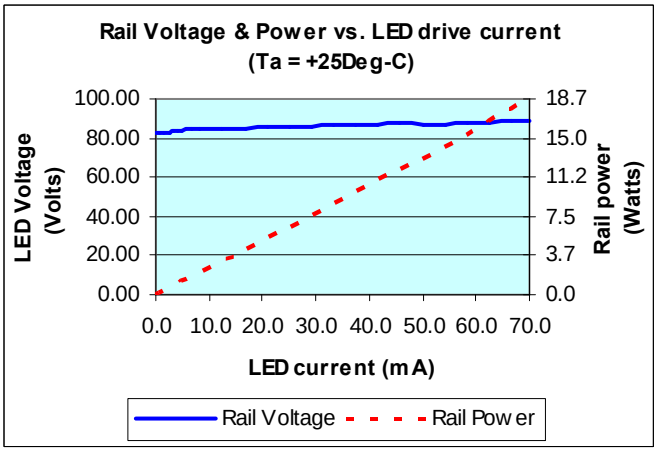
Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
BL	LED Brightness	Ifwd = 150mA	87	93		lm
X	White X coordinate			0.260		
Y	White Y coordinate			0.270		

LED RAIL ELECTRICAL CHARACTERISTICS

Ifwd = 70mA (3 banks per rail), Tled = +75Deg-C (LED's heat sinking to the display)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Vfwd	LED rail forward voltage drop		80	89	98	Vdc

TYPICAL LED RAIL PERFORMANCE GRAPHS



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ACR-3041

NVIS MODE

MAXIMUM RATINGS

10/14/2020

Symbol	Parameter	Value	Unit
Tled	Operating temperature of LED edge light (light rail contact)	-30 to +85	Deg-C
Tstg	LED Rail storage temperature	-40 to +100	Deg-C
Ifwd	Maximum LED forward current (DC)	18	mA

LED OPTICAL CHARACTERISTICS

LED Manufacturer specifications for reference purpose only

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
BL	LED Brightness	Ifwd = 20mA			30	mcd
X	White X coordinate			0.300		
Y	White Y coordinate			0.400		

LED RAIL ELECTRICAL CHARACTERISTICS

Ifwd = 15mA (2 banks per rail), Tled = +75Deg-C (LED's heat sinking to the display)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Vfwd	LED rail forward voltage drop		73	81	89	Vdc

TYPICAL LED RAIL PERFORMANCE GRAPHS