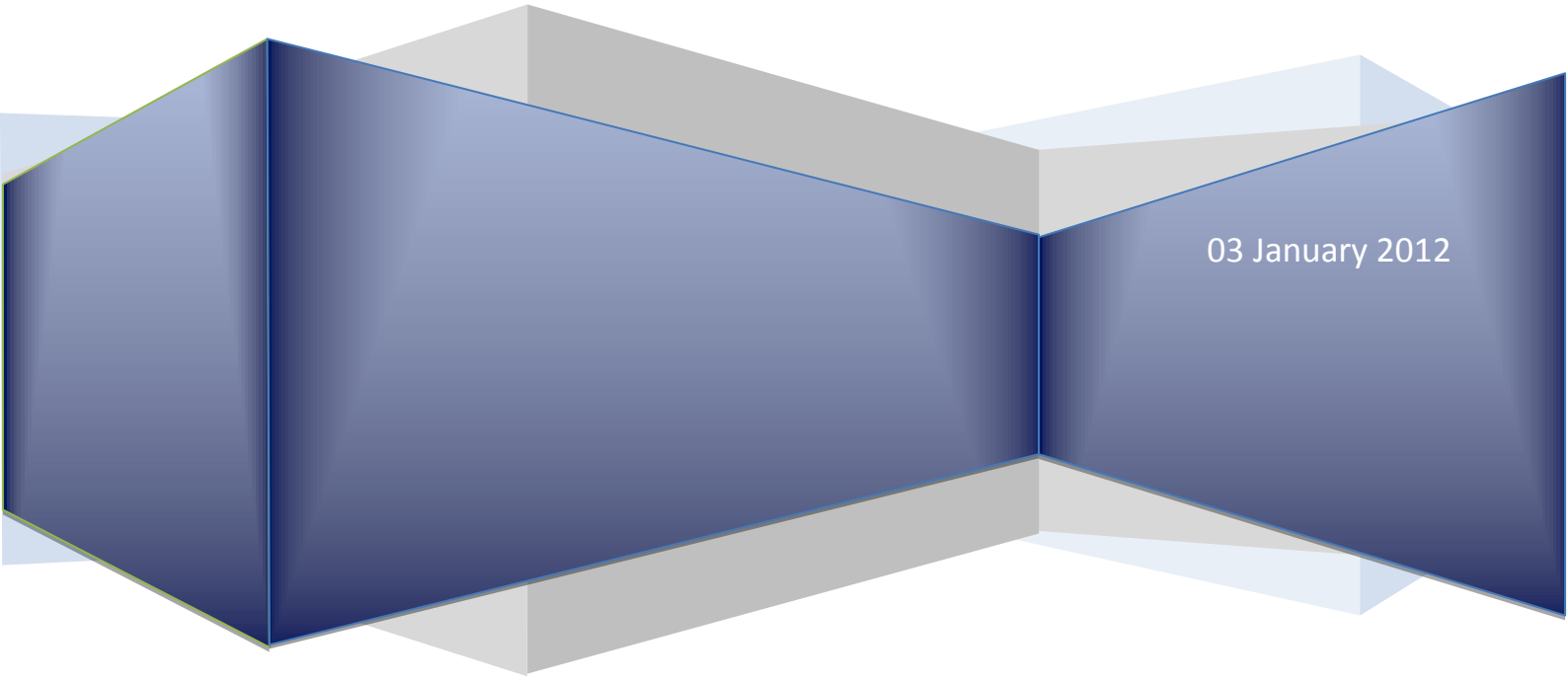
NOVA Energy & Automation

Product Specifications

Color Changing Lighting

Model NEA-RGBLED



03 January 2012

Product Description

1. RGB Color Changing Lighting

Color Changing Lighting is commonly used in medical imaging scan rooms to add patient comfort and control to the scan experience. The patient can select the appropriate lighting for their experience and incorporate the music they prefer to listen to (optional). This comfort and control has been designed to relieve anxiety from the patient, allowing faster scanning time and more accurate scans.

Nova RGB lighting is designed for MRI, CT, X-ray and other imaging installations.

Nova offers several different styles of RGB lighting to compliment individual project architecture.

RGB strip lighting: High Output RGB LEDs set in a flexible ribbon cable (15 LEDs per foot) secured to an aluminium strip which can be fastened in any orientation. The strip has a maximum length of 20 feet per power connection. The strip lighting is commonly used in a cove.

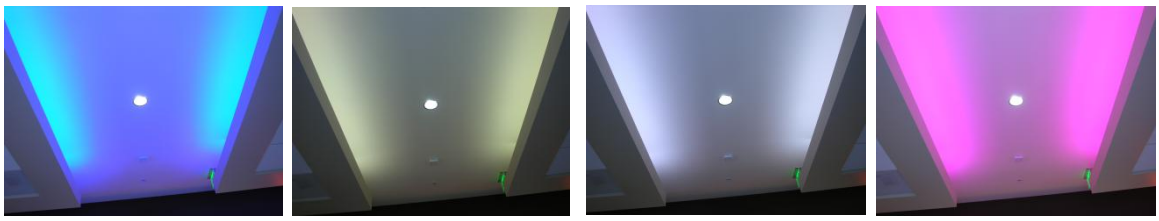


Figure 1: RGB Strip lighting- cove application illuminated ceiling

2. Features

Features

- Simple control integration can be stand alone 2 button operation or Ipad controlled
- UL and cUL standards to conform to NEC.
- MRI tested
- Engineering Support throughout the project
- Multiple configurations to fit the budget and architecture of the room

3. Specifications

RGB Strip Lighting

Model	MX-RGBstrip
Application	The LED RGB strip lighting is the ideal enhancement of patient comfort and control to medical imaging suites.
Description	Specification Grade Color Changing RGB LEDs on flexible printed circuit board with self adhesive back
Input Voltage	12VDC
Power Consumption	3 Watts per linear foot
Wiring	Each fixture requires 4 wire + ground (+ 12VDC, Red, Green, Blue, Ground)
Luminous Intensity	Red- 700 mcd Green- 1200 mcd Blue- 400 mcd
Beam Angle	120^0
Diode Nativity	Nichia
Rated Life	35,000 Hours (LM-70)
LEDs per foot	15 LEDs per foot
Field Modifications	Cut Points every 4.8 inches
Construction	Printed flexible Circuit board with aluminium backing, all non ferrous for MRI applications
Maximum Distance	20 feet Lengths exceeding 12 feet to be center fed
Profile	½ inch width
Wire Termination	Recommend crimp on connector, 6 in wire leads soldered to each strip to allow for easy connections
Approvals	UL/cUL,

Figure 2: RGB strip lighting

RGB Mounting

Model	MX-RGBMnt
Application	The Aluminum mounting bracket is an aesthetic component used to discretely install strip lighting.
Description	Aluminum with Stainless steel hardware and acrylic lens
Styles Available	There are 20 styles of mounting brackets available to fit the need of every installation
Approvals	UL/cUL,

Figure 3: Common Mounting brackets for strip lighting

RGB SD232 Driver

Model	MX-DMX
Application	"Light switch" for RGB LEDs used to signal RGB color changing LED lights.
Modulation	Pulse Frequency Modulation, DMX control
Color Patterns	Factory Programmed to loop through 16 saturated color sequences
Mounting	Wall mounted in a deep single gang electrical box
Output	180W
Controls	Touch screen controls
Wire Termination	Screw terminations to allow for easy connections
Approvals	UL/cUL

Figure 4: DMX Driver

RGB Power Supply

Model	MX-RGBPS
Application	Power supply specific to Nova Max Lumen RGB strip lighting.
Description	600 Watt class 1 Power Supply
Input Voltage	120V AC
Output Voltage	12VDC
Output Power	600 Watts
Input Wire Termination	120VAC 2 wire Screw terminations to allow for easy connections
Output Wire Termination	8 wire screw terminals 12VDC, 2 R 2 B 2 G 2 +12
Approvals	UL/cUL

Figure 5: Power Supply

RGB Power Distribution

Model	MX-RGB-PD2
Application	Class 1 to Class 2 Power Distribution. 4x4 Channel
Description	300 Watt class 1 Power distribution
Input Voltage	12V DC
Input Current	8.3 A / Color
Output Voltage	12V DC
Output Current	3.5 A
Input Wire Termination	12VDC 4 wire Screw terminations to allow for easy connections
Output Wire Termination	16 wire screw terminals 12VDC, 4 R 4 B 4 G 4 +12
Approvals	UL/cUL

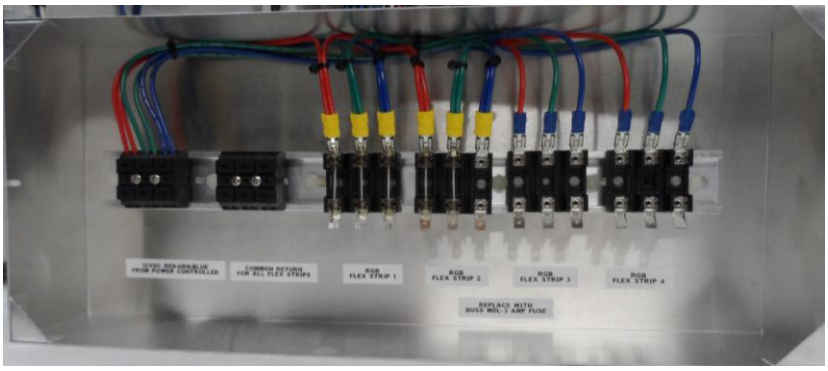


Figure 6: Power Supply

4. Suggested Wiring

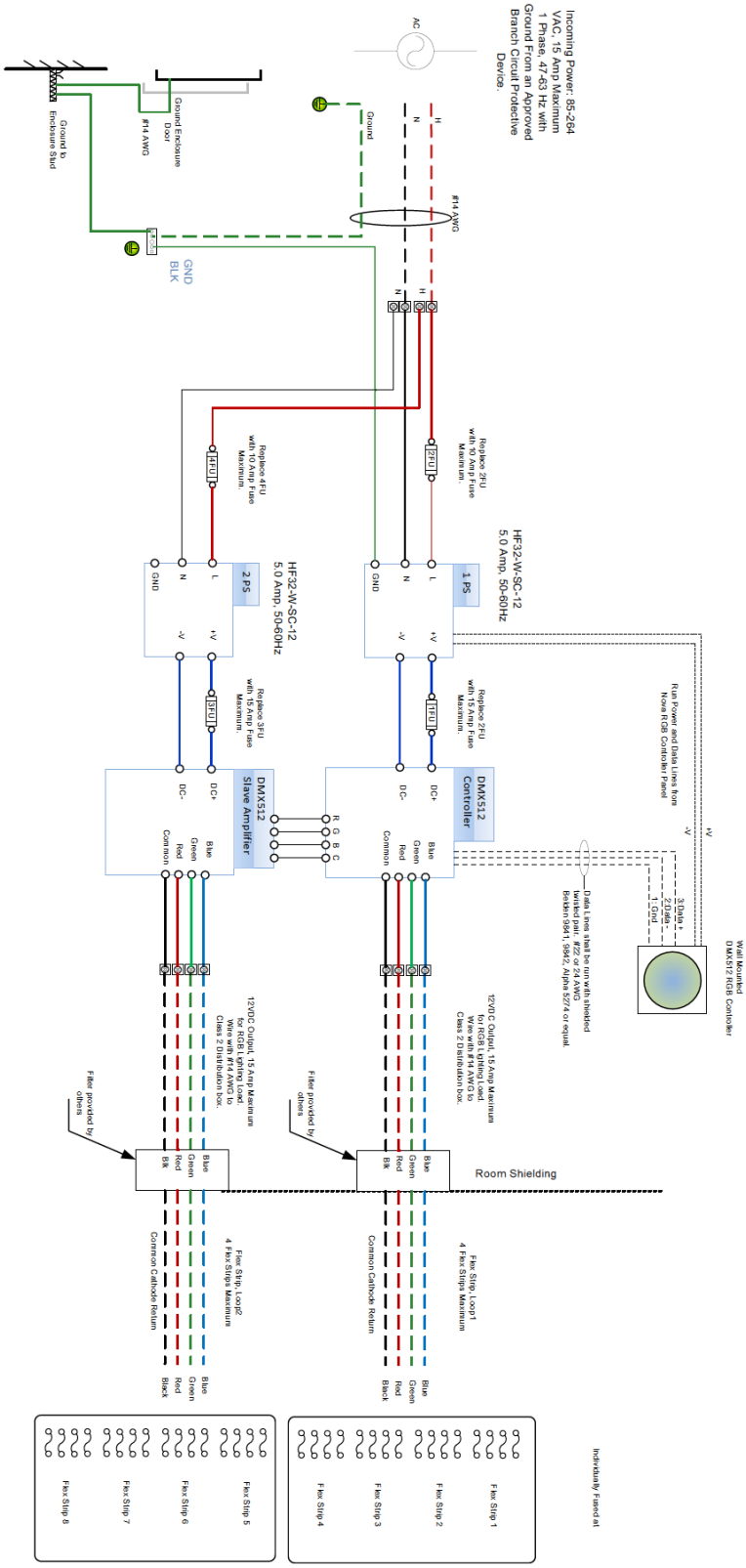


Figure 7: Suggested Wiring Diagram

5. Suggested Strip Orientation

A vertical orientation of the LED strip and a white inside of the cove will reduce shadowing on the ceiling.

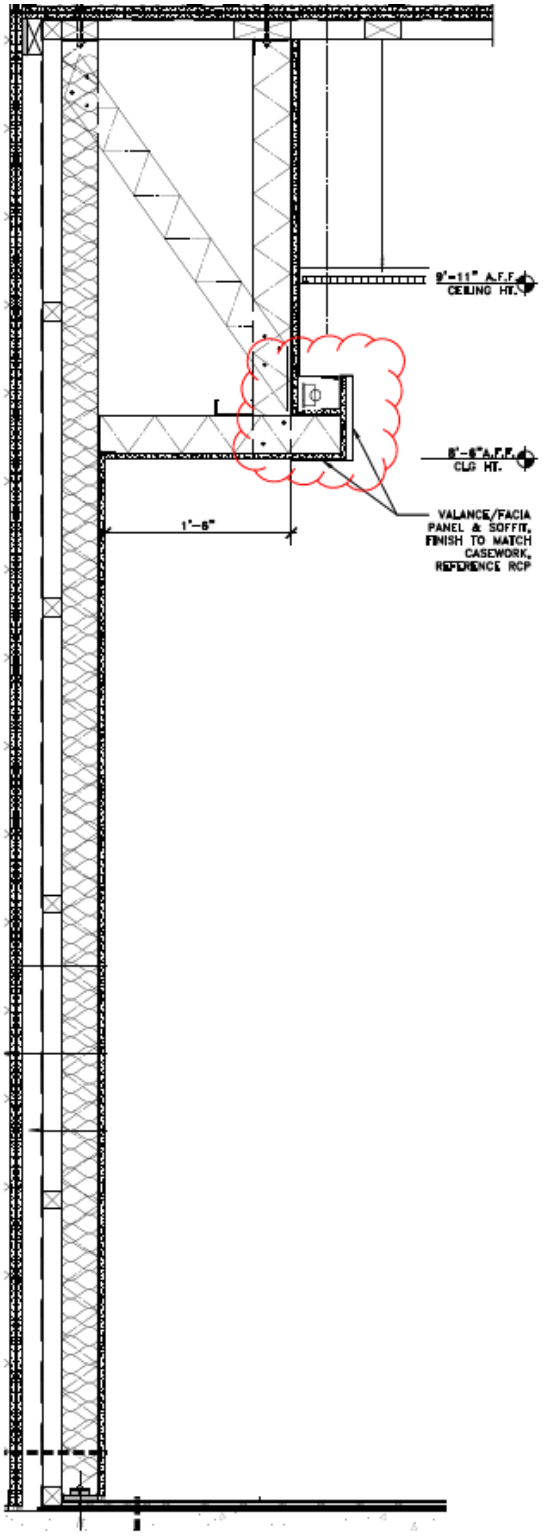


Figure 8: Suggested Strip Orientation

6. Suggested Room Layout

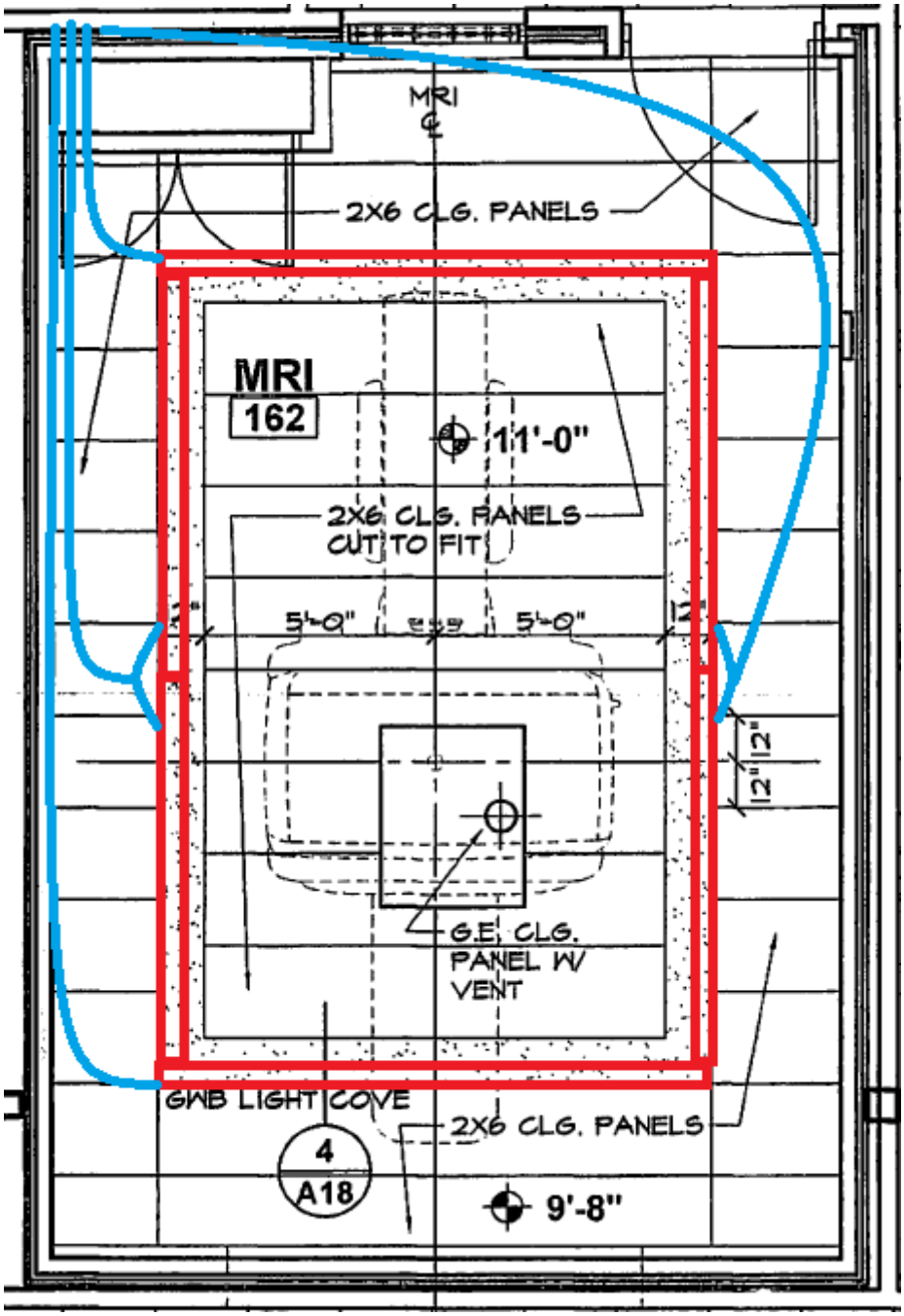


Figure 9: Suggested Room Wiring

7. Additional requirements

RF Filter	Supplied by shielding contractor
Description	8 wire penetration (2 +12VDC, 2 Red, 2 Green, 2 Blue)
Quantity	4
Current	Greater than 8.3 A

Cable	Supplied by others
Description	18 AWG 4 conductor shielded cable
Suggested Manufacturer	Belden or equal
Suggested Part Number	83654

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Cond.	Color Code	Standard Lengths		Standard Unit Weight		Insulation Thickness		Jacket Thickness		Nominal OD		Nominal Capacitance			
					Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Inch	mm	* pF/ Ft.	* pF/ m	** pF/ Ft.	** pF/ m
18 AWG Stranded (19x30) TC Conductors • Conductors Cabled • Overall Beldfoil (100% Coverage) + TC Braid Shield (85% Coverage)																		
Plenum • FEP Insulation • Red FEP Jacket																		
300V RMS 	**83654**	NEC: CMP CEC: CMP FT6	4	See Chart 2 (Tech Info Section)	100 500† 1000†	30.5 152.4 304.8	6.2 21.5 46.0	2.8 9.8 20.9	.007	.18	.014	.36	.199	5.05	33	108	60	197

Figure 10: Belden Cable Specifications

8. Approvals

Prepared By _____

([**Job Title**])

This document requires the following approvals

Approved By _____

([**Job Title**])

_____

([**Job Title**])

Approval Date _____