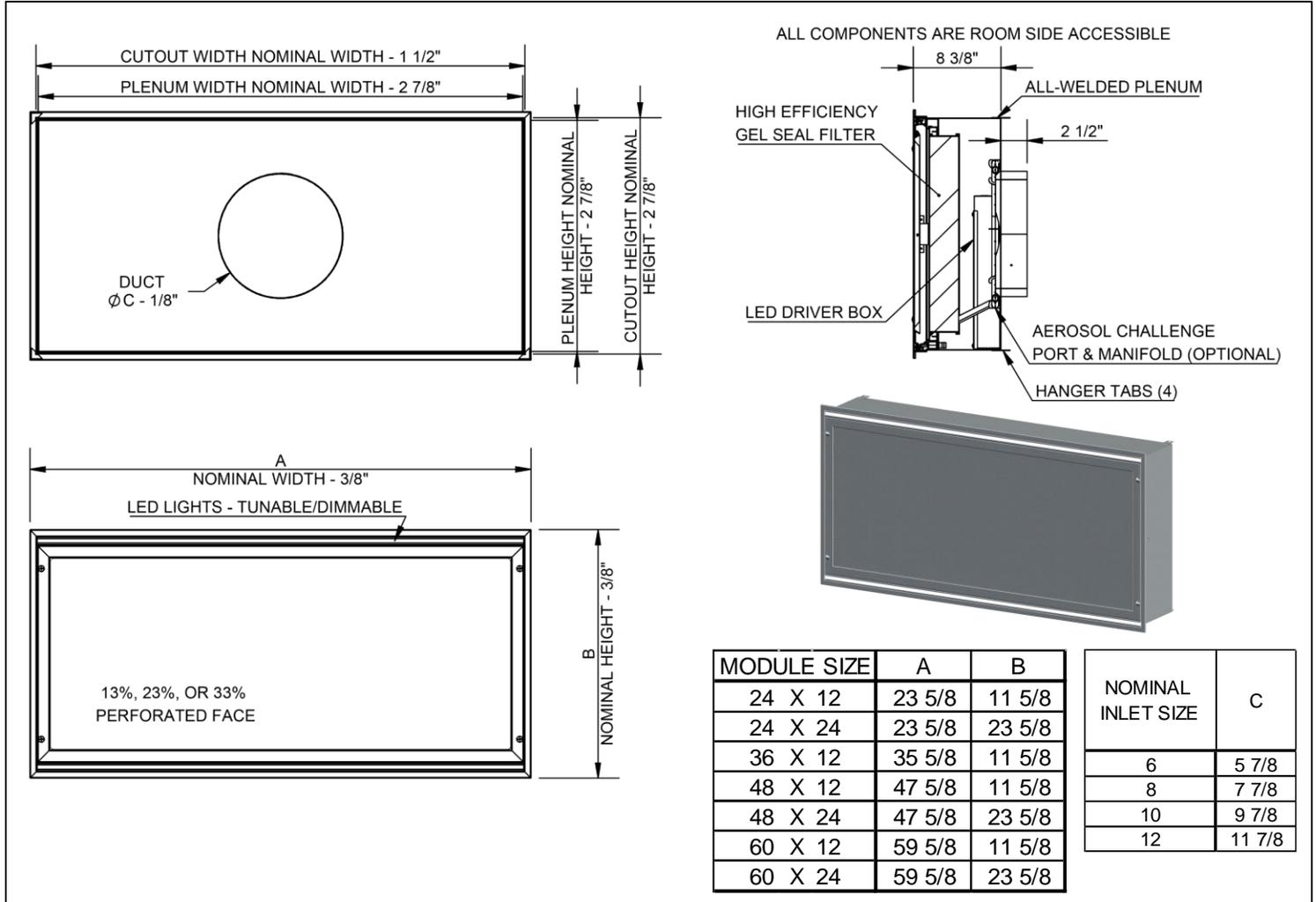# Laminar Flow Ceiling Diffusers
Integral LED luminaire • Perforated Face

Model: **TLFR-AA-LED** • Removable Face • HEPA Filter Rack • Aluminum
TLFR-SS-LED • Removable Face • HEPA Filter Rack • Stainless Steel

MODULE SIZE	A	B
24 X 12	23 5/8	11 5/8
24 X 24	23 5/8	23 5/8
36 X 12	35 5/8	11 5/8
48 X 12	47 5/8	11 5/8
48 X 24	47 5/8	23 5/8
60 X 12	59 5/8	11 5/8
60 X 24	59 5/8	23 5/8

NOMINAL INLET SIZE	C
6	5 7/8
8	7 7/8
10	9 7/8
12	11 7/8

General Description

- Model TLFR-LED filtered laminar flow diffuser generates a low velocity, evenly distributed, unidirectional air pattern.

- Integral LED luminaire with tunable color temperature. 2700K-6500K @ 90 CRI.

- 20 GA, walkable plenum up to 250 lbs

- Airtight construction with all-welded plenum seams

- Hanger tabs for unit support above ceiling

- Quick change tool-less auto-aligning filter retention system

- Compatible with 2", 3", and 4" thick, gel seal R-series filters.

- Static Pressure Test Port

- Perforated face is quickly removed by loosening ¼ turn fasteners.

- Retainer cables prevent accidental dropping of perforated face after removal.

- UL Listed Air-handling luminaire

- Designed for surfaced mounted or conventional 1" or 1½"T-bar ceiling systems

- Optional 90-minute battery backup @ 20% output

- Optional tunable Green-6500K controller option

- Optional fixed color temperature, factory set.

- Optional snap-in removable equalization baffle

Titus

Basic Unit Configuration

Check ☑ if provided.

Construction Material

☐ Aluminum Construction

☐ 304 Stainless Steel Construction

Face Free Area

☐ 13% Free Area Perforated Face
(For airflows up to 35 CFM/ft^2*)

☐ 22% Free Area Perforated Face
(For airflows between 35 & 65 CFM/ft^2*)

☐ 33% Free Area Perforated Face
(For airflows 65 CFM/ft^2 and higher*)

Lighting Configuration

☐ TD - Tunable White – 2700K-6500K

☐ TG - Tunable Green to White – Green-6500K

☐ FC - Fixed Color, Factory Set: _____

Note: Indicate Green or color temperature 2700K-6500K

Finish

☐ #01 Aluminum Finish

☐ #04 Mill Finish

☐ #21 Enviro-Thane* to match sample

☐ #26 White

☐ #25 Off-White

☐ #84 Black

Accessories (Optional)

Check ☑ if provided.

☐ Radial Damper – Cable Operated

☐ Butterfly Damper – Cable Operated

☐ Aerosol Injection Port & Distribution Manifold

☐ 90-minute Battery Backup

☐ Removable Equalization Baffle

☐ Factory Certified Leak Tested -
In accordance with IEST-RP-CC034.3

☐ Fully Welded Plenum & Inlet

☐ HEPALert LED Filter Indicator – 24V

☐ HEPALert LED Filter Indicator – Battery Operated

☐ Insulated Plenum (External)

Listings and Lighting Specifications

UL Listings

- UL 1598 - Standard for Safety Luminaires
- UL 2043 - Standard for Safety Fire Test
- UL 2108 - Standard for Low Voltage Lighting Systems
- UL 8750 - Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products
- UL 1310 - Standard Class 2 Power Units
- UL 94 - Standard for Tests for Flammability of Plastic Materials for Parts in Devices and Appliances
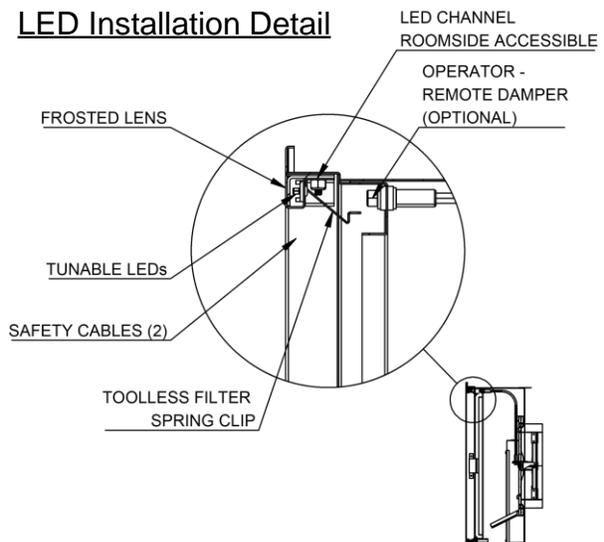
Lighting Specifications

- Tunable/Dimmable - 2700-6500k; 90CR
- Color: White - Tunable from Warm to Cool White
- Variable Controller - 0-10V
- Driver - 100watt - Class 2 - 24V Output - 120-277VAC Input
- Efficacy (L/W) - 6,160/100 = 61.6 Lumens per watt
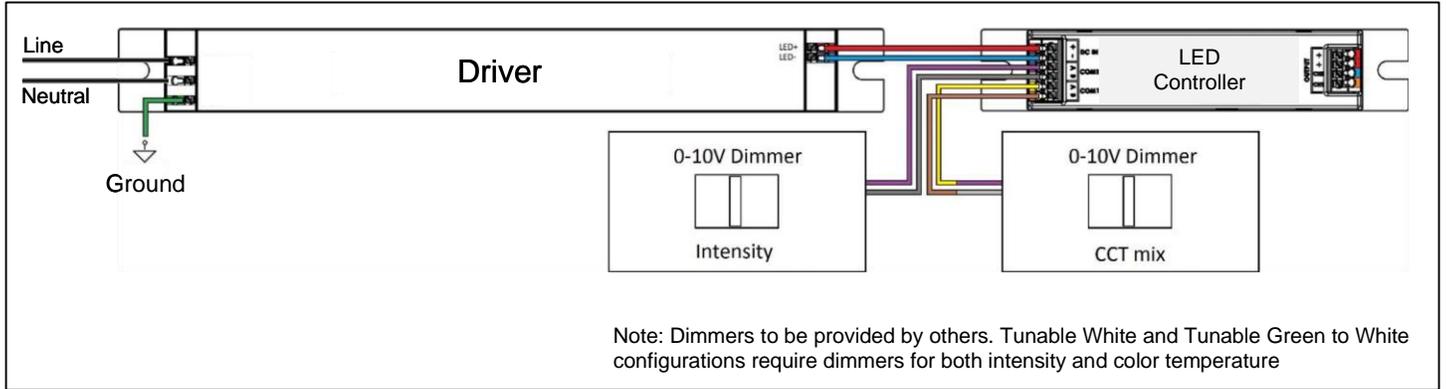- 100-240VAC = 1.1Amp per Unit or 277VAC = 0.5Amps per Unit

Driver Details

- Wide input range, 100~305V (Class I)
- Full power output at 70-100%, constant power operation
- Metal Case with IP67 rated ingress protection
- Surge Protection with 6KV/4KV
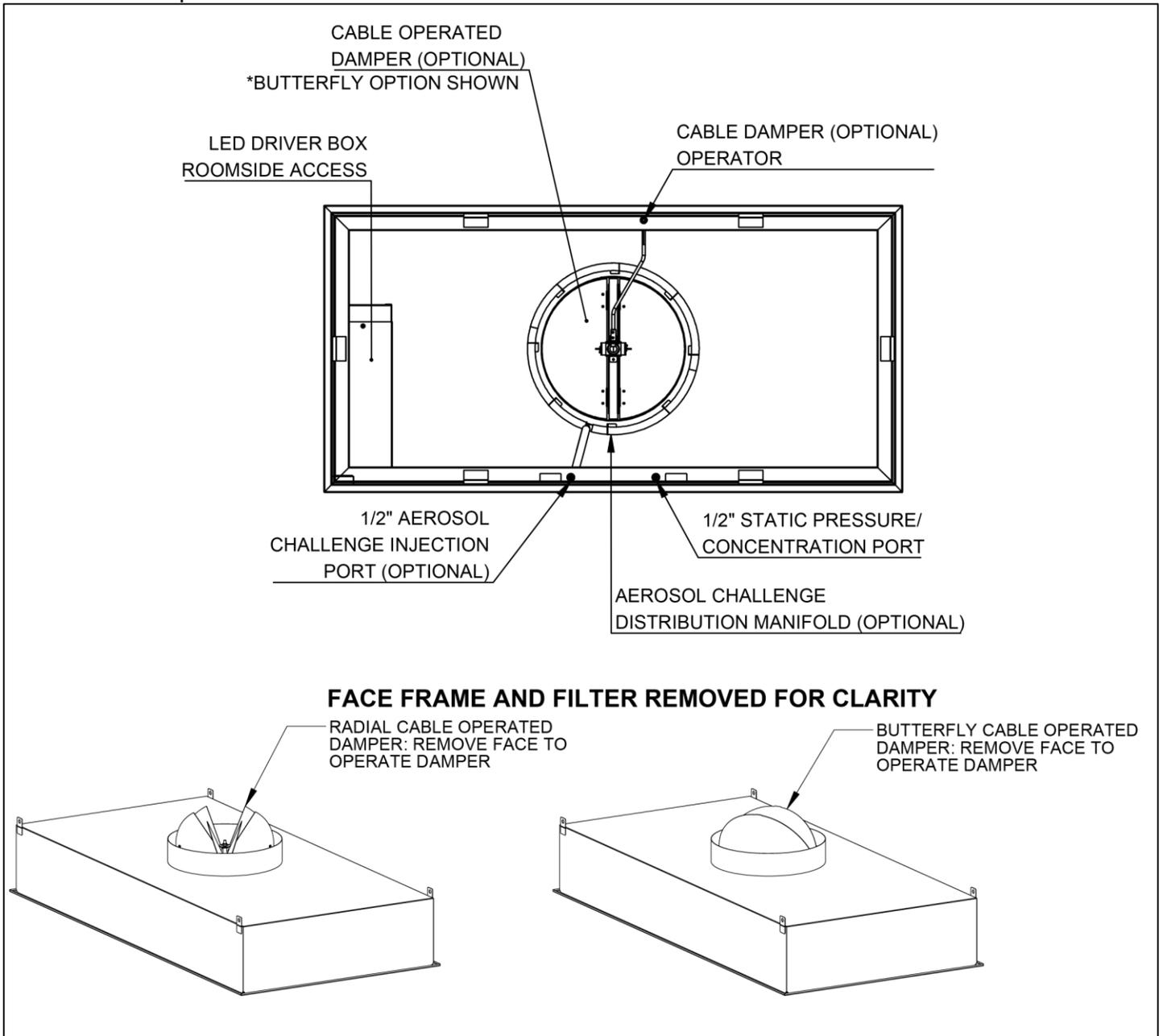- -40°F – 195°F operating range
- Lifetime >50,000 hrs.

LED Installation Detail

LED CHANNEL
ROOMSIDE ACCESSIBLE

OPERATOR -
REMOTE DAMPER
(OPTIONAL)

FROSTED LENS

TUNABLE LEDs

SAFETY CABLES (2)

TOOLLESS FILTER
SPRING CLIP

Titus

Wiring Diagram:

Line

Neutral

Driver

LED+
LED-

LED
Controller

Ground

0-10V Dimmer

Intensity

0-10V Dimmer

CCT mix

Note: Dimmers to be provided by others. Tunable White and Tunable Green to White configurations require dimmers for both intensity and color temperature

Port & Cable Operator Details:

CABLE OPERATED
DAMPER (OPTIONAL)
*BUTTERFLY OPTION SHOWN

CABLE DAMPER (OPTIONAL)
OPERATOR

LED DRIVER BOX
ROOMSIDE ACCESS

1/2" AEROSOL
CHALLENGE INJECTION
PORT (OPTIONAL)

1/2" STATIC PRESSURE/
CONCENTRATION PORT

AEROSOL CHALLENGE
DISTRIBUTION MANIFOLD (OPTIONAL)

FACE FRAME AND FILTER REMOVED FOR CLARITY

RADIAL CABLE OPERATED
DAMPER: REMOVE FACE TO
OPERATE DAMPER

BUTTERFLY CABLE OPERATED
DAMPER: REMOVE FACE TO
OPERATE DAMPER