Product Overview (for complete specifications, see pages 2 & 3)
Upgrade Capability: LED components may be upgraded in the field to increase energy efficiency.

Construction: I.C. rated. Extruded aluminum housing provides superior fit and finish and is mounted in Hunter Douglas Linear Levels ceiling. Continuous runs have hairline joints. Runs of fixtures can be built to match field conditions.

Continuous Illumination: LED arrays can be oriented to provide consistent illumination in custom-length runs. 90 + CRI available.

Electrical: LED components by major manufacturers. Fixtures can be fitted with control interface devices and specialty LED components (consult factory). Standard Output, High Output and Custom Output options available.

Optical: Sculpted lens available in medium diffuse formulation.

Standard Nomenclature

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Product</th>
<th>Output</th>
<th>Driver Options</th>
<th>Ceiling System</th>
<th>Paint Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gammalux Lighting Systems</td>
<td>Gammalux</td>
<td>Light Levels system</td>
<td>DVR Static Driver</td>
<td>Hunter Douglas</td>
<td>CCT10 Match to Hunter Douglas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cross Section (nom) 2&quot; x 2&quot; Housing Recessed</td>
<td>For Dimming Options, See pg 2</td>
<td>Linear Levels system</td>
<td>10% reflective Cotton White</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Color Temp. (nom) 27 2700 K 50 5000 K 30 3000 K 90 RGB (select)</td>
<td></td>
<td></td>
<td>CCT28 Match to Hunter Douglas</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>35 3500 K output code H*</td>
<td></td>
<td>20% reflective Cotton White</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>40 4000 K</td>
<td></td>
<td>NAT Gammalux match of</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hunter Douglas Natural</td>
<td>#7163</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GLL22RC2</th>
<th>1SL358</th>
<th>120V</th>
<th>DVR - 4' N - REC/LL</th>
<th>ASLMD</th>
<th>NAT</th>
<th>XX</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED Arrays in X-Sec 1 (for white only) 2 (for RGB only) Luminair Model 2nd Generation</td>
<td>CRI ** 8 for 90+ 9 for 90+ Lamp Type LED</td>
<td>Fixture Length Up to 12' single-piece housings available. Specify continuous runs in total length.</td>
<td>Length Option N Nominal length S Specific length</td>
<td>Shielding *** ASLMD Acrylic Satin Lens (Medium Diffuse)</td>
<td>Options BPE Battery Pack EM. Kit DL UL Damp Label EMERG Emergency clkt.</td>
<td></td>
</tr>
</tbody>
</table>

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* RGB must be High Output and controlled by DMX driver option
** 90+ CRI option increases wattage by nom. 8%. For RGB, do not select a CRI option.
*** Shielding option is ASLMD only.
Specifications (continued on next page)

Electrical

Output: Standard (S) and high (H) options deliver a pre-set lumen package through the fixture shielded (see chart below). Custom-programmed output (C) is specified as 50-99% of the high output lumen or watts-per-foot value (restrictions apply).

Static Driver: Osram Optotronic* programmable driver, wired for static operation (DVR).

0-10V Dimming: Osram Optotronic* programmable driver, wired for 0-10v control and dimming to 10% (ZTV10) or to 1% (ZTV1).

Step Dimming: Generic step dimming driver, two hot inputs for 100% and 50% output (SD2).

DMX Dimming: Generic DMX driver with three loose control wires exiting fixture at power feed location (DMX).

DALI Dimming: Generic DALI driver with two loose control wires exiting fixture at power feed location (DALI).

Lutron Dimming: Hi-Lume 1% via EcoSystem control (L3DAE). Hi-Lume 1% via 3-wire control (L3DA3W). Hi-Lume 1% EcoSystem with Soft-On, Fade-to-Black (LDE1). 5-Series dim to 5% EcoSystem (LDE5).

RGB: Uses two rows of Osram 72618*. RGB with all channels at full output consumes approximately 11 watts per foot. 
- Red channel at full output will provide approximately the same # of lumens compared to our 3,500K white at High Output.
- Green channel at full output will provide approximately 171% of lumens compared to our 3,500K white at High Output.
- Blue channel at full output will provide approximately 35% of lumens compared to our 3,500K white at High Output.

White Emitter*: Nichia 757G emitters binned within 3 MacAdam ellipses in Osram PrevaLED Linear or Gammalux proprietary array. 90+ CRI option (CRI code 9) results in nom. 8% drop in efficacy; increase calculated wattage by 8%

Battery Pack: Integral Bodine BSL310LP*. 4W max input. 10W initial output.

LED System: 70% lumen output (L70) at max 85 degrees C calculated at >60k hours. Fixtures are shipped with anti-static gloves to minimize the risk of damage to LEDs during installation. 5 year limited warranty.

Upgrade Capability: LED assemblies can be replaced in the future with the latest factory-provided and fully warranted components. On-board sensors, On-board sensors and control interface devices and alternate LED components may be specified (consult factory).

Construction

Housing: I.C. rated. Extruded aluminum body 2.4” wide x 2.31” high, 6063T5, 0.070” min thickness. In continuous runs, each housing is 12” max unless longer housings are pre-coordinated with the factory to reduce joints and save installation labor. All fixtures are built per approved factory drawings and tested as a complete system at the factory.


Lamping: Runs ordered in Specific Length (Length Option S) require special lamping components to create consistent illumination and may have a higher than normal price per foot. Runs ordered in Nominal Length (Option N) may be length-adjusted at the factory to use standard lamping components. Factory drawings will show all dimensions for approval prior to production. Fixtures built to less than 4’ may not achieve posted lumens per foot - consult factory.

Mounting: Recessed into a Linear Levels ceiling system by Hunter Douglas. Mounting brackets slide along the housing side to interface with the Hunter Douglas Universal Carrier butted against the housing or passing within 6” of the fixture end.
Specifications (continued)

Optical

**Acrylic Satin Lens, Medium Diffuse:** Snap-in. Shall be 100% DR acrylic (ASLMD).

See lens images on photometric pages.

Finish

Housing is electrostatically sprayed with high solids aliphatic two component polyurethane to an average thickness of 2 mils. over acid etching primer or commercial clear anodizing. High quality paint finish, matched to Hunter Douglas panels.

Packing and Shipping

Fixtures built for continuous rows are given a specific location identifier, clearly identified on factory layout drawings provided to installing contractor. Location identifier is printed on the fixture’s ID Label, protective wrapping and on each end of fixture carton. Shipping pallets are built with 2” clearance, extending beyond the length and width of cartons, providing shipping protection.

Approx. weight of 4’ module is 12 lbs. including carton. Weight of pallet and supplemental packing materials not factored in.
Light Levels Series GLL22RC2-LED-LENS
General Illumination - Recessed Into Hunter Douglas Linear Levels Ceilings
Direct Distribution with Sculpted Lens

Photometric Reports for
STANDARD OUTPUT FIXTURES

FIXTURE USES LENS ASLMD (MEDIUM DIFFUSE) AND 3500 K BOARDS. @ 80+CRI

IESNA: LM 79-2008
ISSUEDATE: 3/8/2015
TEST: 33801 med to MD+SO
TESTLAB: UL Verification Services Inc.
MANUFAC: GAMMALUX LIGHTING SYSTEMS
LUMCAT: GLL22RC2-1SOLED35-ASLMD
LAMPS: PLPG2-BAR-1100-335.289X35 DC

EFFICACY (Total): 57.5 LPW
DISTRIBUTION % UP: 0%
DISTRIBUTION % DOWN: 100%
CIE CLASSIFICATION: DIRECT

LUMINOUS OPENING: RECTANGULAR
Width: 0.08 (Feet)
Length: 4.00
Height: 0.21
INPUT WATTS: 25.4

Acrylic Satin Lens, Medium Diffuse (ASLMD)

Quadrispatially Symmetric:
Down 2 Degrees; Wide 50 Degrees
Light Levels Series GLL22RC2-LED-LENS
General Illumination - Recessed Into Hunter Douglas Linear Levels Ceilings
Direct Distribution with Sculpted Lens

Photometric Reports for HIGH OUTPUT FIXTURES

FIXTURE USES LENS ASLMD (MEDIUM DIFFUSE) AND 3500 K BOARDS. @ 80+CRI

IESNA: LM 79-2008
ISSUEDATE: 3/9/2015
TEST: 33801 med to MD
TESTLAB: UL Verification Services Inc.
MANUFAC: GAMMALUX LIGHTING SYSTEMS
LUMCAT: GLL22RC2-1HOLED35-ASLMD
LAMPS: PLP62-BAR-1100-935-288X30 DC

EFFICACY (Total): 55.2 LPW
DISTRIBUTION % UP: 0%
DISTRIBUTION % DOWN: 100%
CIE CLASSIFICATION: DIRECT

LUMINOUS OPENING: RECTANGULAR
Width: 0.08 (Feet)
Length: 4.00
Height: 0.21
INPUT WATTS: 35.3

Acrylic Satin Lens, Medium Diffuse (ASLMD)

Quadradensity Symmetric
Dashed: 6 Degrees Solid 30 Degrees
Mounting Details

Factory Drawings: Fully dimensioned factory drawings will be provided upon receipt of purchase order.

Linear Levels Integration Details

Universal Carrier Linear and Levels ceiling system by Hunter Douglas

Fixture mounting bracket can be slid along housing to interface with cut Universal Carrier.

Fixture mounting bracket can be extended 6" past housing to interface with continuous Universal Carrier.

Gammalux Lighting Systems reserves the right to change the details of fixture design and construction at any time.
Custom Programmed Output can be specified to produce approximate Delivered Lumens per Foot, Percentage of High Output Value or Maximum Watts per Foot.

Delivered Lumens Per Foot
Gammalux deals only in delivered lumens per foot. When working to match or exceed a competitor product’s Lumens Per Foot package, be sure you are looking at their Delivered (through the lens) lumens per foot, not their System (bare board) lumens per foot.

In the Gammalux item #, use C as the Output designator and add a fixture description stating the required Lumens Per Foot value (i.e. if you need 600 lumens per foot delivered by the fixture, the line note would read “Program = 600 LPF”).

Percentage of High Output Value
If the required delivered lumens per foot are not known, run lighting calculations using our High Output IES file and identify the percentage of decrease required to produce the correct lighting in the space.

In the Gammalux item #, use C as the Output designator and add a fixture description stating the required percentage of decrease from our High Output value (i.e. for 60% of our High Output value, the line note would read “Program = 60% of High Output”).

Maximum Watts Per Foot
In the Gammalux item #, use C as the Output designator and add a fixture description stating the required Maximum Watts per Foot (i.e. if you need the fixtures capped at a maximum of 7 watts per foot, the line note would read “Program = 7 WPF”).

For all three methods, custom programming capability is currently 50-99% of our High Output value. For requirements outside of this range, consult factory.