

SIMPLIFY YOUR LUMINAIRE DESIGN







LED LIGHT ENGINES

Designed for simplicity

These high performance light engines are ready to take your luminaire design to the next level of performance. Designed to be "standard," the boards are easy to seamlessly drop into a wide variety of existing luminaire form factors. They offer our OEM and retrofit customers complete turn-key solutions for solid state lighting. They provide high lumen output and are optimized for ease-of-use with TRP's comprehensive line of high performance LED drivers. Most models utilize constant-current designs and can be used in series or parallel combinations.

Light Engine Features:

- Quality Nichia LED Chips
- Range of CCT options, from 2700K to 5000K
- Linear modules share a design that can be used individually or in any combination
- High color rendering, most with 83 CRI or better
- Most have a 3 step MacAdam Ellipse
- Designs with tight LED pitch to minimize pixelization, reducing the need for complex optics
- Board output efficiency for most is well over 100 lumens per watt
- UL Recognized Components and RoHS Compliant





Benefits

The simplicity of utilizing our LED Light Engines and LED drivers overcomes cost and time barriers to LED system development. They create a perfect "value added" opportunity for our customers:

- Lower development costs
- Faster design cycle, less time to market
- Models designed for a variety of applications

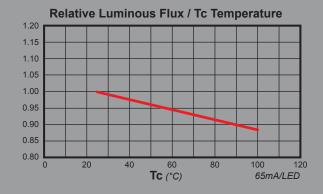
Long Life:

Our Light Engines offer 50,000 hrs life @ 70% lumen maintenance, if used properly per the specification.

Life and lumen maintenance are influenced by the thermal characteristics of the fixture in which the engine is mounted. Steady state thermals in the application will dictate if the boards need to be mounted directly to a metallic housing and/or include a thermal pad.

For example, a fully enclosed recessed fixture will require better thermal mounting than an open-air pendant. Final lumen maintenance values are best calculated once the luminaire design is completed and tested.





See the product data sheets on the TRP website for complete specifications and application information.

Applications

We created a core product line that can fill the needs of a wide variety of applications with great performance:

- Linear light engines that are daisy-chainable, in sizes to fit standard troffers
- 12V Narrow linear light engines for cove, undercabinet and sign lighting
- Round light engines for commercial and residential downlights
- Square light engines for surface-mount, recessed or suspended office luminaires
- Canopy light engines for outdoor: garage lights, gas station lights and area lighting

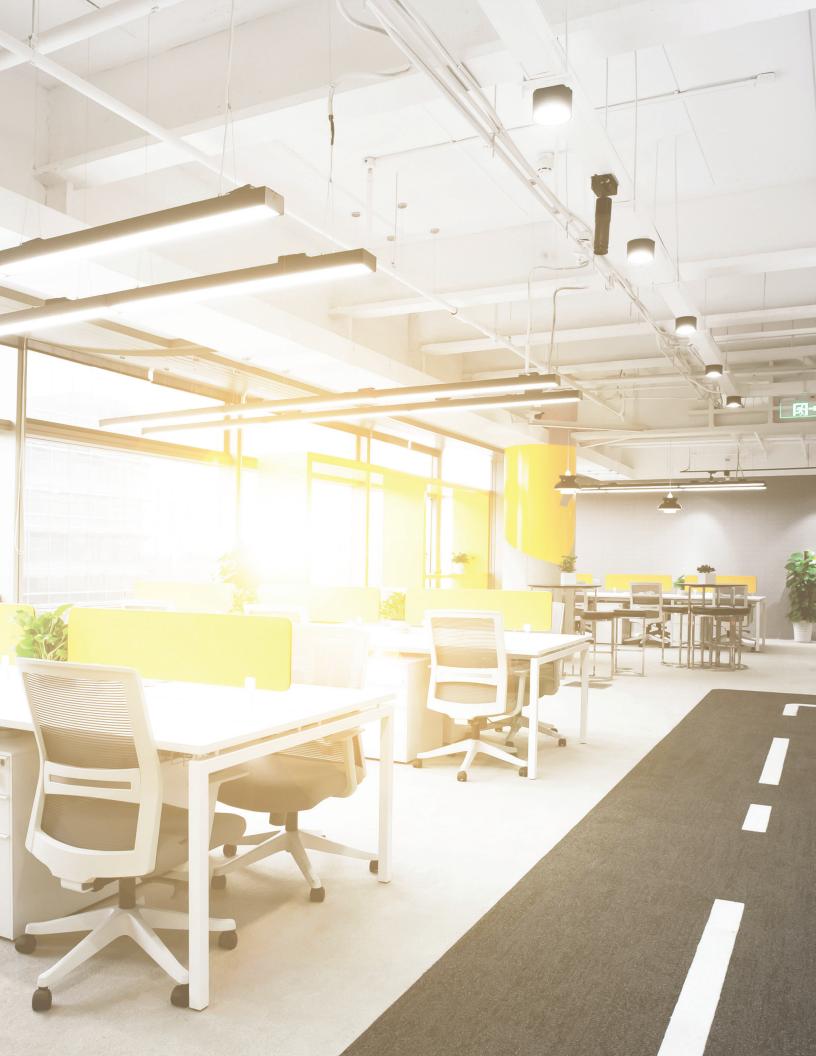
Advanced Engineering

Hubbell Lighting Components capitalizes on our years of experience in the lighting industry, our LED driver expertise, and our Norlux brand custom service capabilities provide effective products for a wide variety of applications that utilize LEDs.

Customizable:

With a background in custom development, it's easy for us to make unique modifications of our standard light engine designs for your needs. We also design AC LED boards. Contact us today.





STANDARD LED LIGHT ENGINES

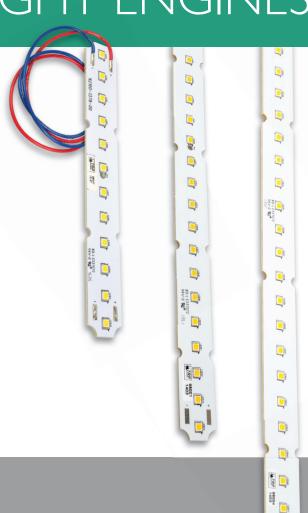
Linear Light Engines

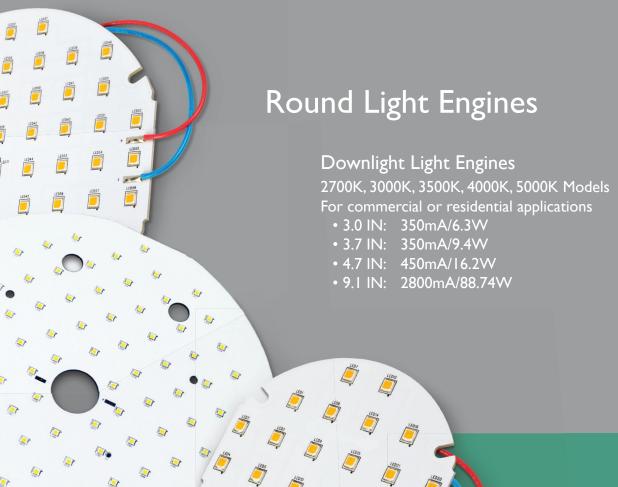
Troffer Light Engines

- 2700, 3000K, 3500K, 4000K, 5000K Models For standard commercial applications
- 5.5 IN: 175mA/3.1W
- 11 IN: 350mA/6.3W
- 23 IN: 700mA/12.5W

Specialty Narrow Light Engine

- 3000K, 3500K, 4000K, 5000K Models
- Flexible, can be cut to length
- 12V Constant-Voltage
- 22.7 IN: 445mA total/5.3W







Square Light Engines

Fingerboard Light Engines

- 3000K, 3500K, 4000K Models
- Design eliminates excess board, provides uniformity
- 10.2 IN: 700mA/16.1W

Rectangular Light Engines

- 4000K, 5000K Models
- High brightness, for outdoor lighting
- 7 IN: 700mA/26W Canopy Engine
- 2.5 IN: 500mA/7.76W



