

Crossover[®]
SOLID-STATE LIGHTING

GENERATION 3
CANOPY LIGHTING SENSATION

ALL THE BRILLIANCE OF SCOTTSDALE IN LED



lsi
Petroleum Lighting™

The #1 Choice in Canopy Lighting

Crossover®

GENERATION 3

At LSI, we have delivered the most revolutionary lighting solutions to the petroleum industry for more than 34 years. In 1995, we introduced the world to the Scottsdale®, the standard in canopy lighting to this day. Our primary focus has always been to deliver innovative lighting solutions, like the Scottsdale, that are designed to enhance your image, increase customer traffic, reduce costs and improve operating efficiency. As we continue in our tradition of leadership and innovative product development, we have set out to deliver today's best-in-class canopy lighting fixture based on a simple LSI formula...deliver what you want!

We asked what you wanted...

- **Scottsdale brilliance**
- **Scottsdale aesthetics**
- **Scottsdale ease of installation**
- **Scottsdale low maintenance**
- **And the energy and maintenance efficiency of LED**

Now you've got it! The **LSI Crossover Generation 3** is everything you love about the Scottsdale and much more; performance, aesthetics, ease of installation and superior LED energy and maintenance efficiencies. It's all about **adding value and reducing cost**.

Only LSI can offer you a lighting solution with true Scottsdale-level performance, image and ease of maintenance. So, we think you'll agree...*LSI's new **Crossover Generation 3** is, like the Scottsdale... a simply brilliant solution!*



The Crossover Generation 3 canopy system delivers a refined level of lighting performance and control not found in any other LED canopy fixture. The Crossover Gen 3 is built on our unique solid-state technology and retail petroleum market experience.

- 20+ years leading the way in innovative solid-state technology
- 34+ years experience in designing and manufacturing lighting fixtures for service stations
- Largest installed base of LED fixtures in the world
- Pioneers of the industry-leading Crossover platform with SmartTec™ technology and TriLume™ optics

The new Crossover Generation 3 has been developed with one ultimate goal in mind – ***Provide the absolute best LED lighting solution and make it affordable.*** For the past three years, we have applied our best of the best to help create a completely integrated LED canopy lighting system...leading edge chips, optics and driver technologies in a refined fixture design. The end result: a brilliant new lighting system packed with all the benefits of the Scottsdale and LED technology.

LIGHTING PERFORMANCE

- Multiple optics and drive current choices means you can create the environment that best suits your needs
- Thirty-one lumen output choices
- From the soft appeal of symmetrical and asymmetrical illumination to Scottsdale-style lighting brilliance, you have your choice with LSI's Crossover Gen 3
- Easy to clean, clear tempered glass lens protects LED chips from the elements to ensure illumination quality for the lifetime of the fixture

EASY INSTALLATION

- Installs in less than half the time compared to competitors' designs
- Replaces Scottsdale and Scottsdale-style fixtures with no cutting or drilling the deck - no need to relocate electrical supply
- For new canopies – installs like the Scottsdale with no sealant required

LOWER OPERATING COST

- Patented SmartTec intelligence and reflector technology ensure optimum light output with significant energy savings
- Intelligent thermal diagnostics guard driver and optical components against extreme operating conditions
- The only fixture on the market with IP65, IP66, IP67 and IP68 ratings – prevents moisture and dirt from entering the fixture resulting in overall lowest maintenance and longest fixture attractiveness life span in the industry
- Unique breathable design eliminates internal pressure build-up

LSI SmartTec – Technology from a Smart Vision Intelligence Makes All The Difference

Innovative SmartTec technology combined with the latest, most robust chip technology converge to create an integrated lighting system unique to the Crossover platform. It's this innovative thinking that makes all the difference.

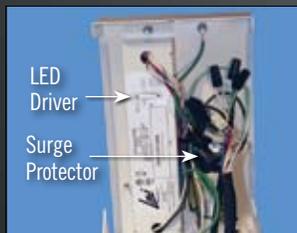
SmartTec delivers proprietary two-way communications between the solid-state driver (SSD) and the solid-state circuit board lighting engine (SSL). This harmonic interplay between the SSD and SSL provides for optimal long-term performance, value and assurance unlike any other LED canopy system. The entire system works in unison to deliver the overall best lighting consistency and control, including:

- **Thermal Control** – sensors in both the SSD and SSL monitor and reduce drive current when ambient temperatures exceed rated values. Current is lowered in imperceptible 5% increments every 5 minutes until recommended operating temperature is reached
- **Two-Stage Surge Protection** – All Crossover canopy fixtures have superior protection against lightning strikes and other voltage surges. MOV surge protection on all three input lines (line-to-ground, neutral-to-ground, line-to-neutral) meet the stringent C-Medium protection level (10KV, 5KA) requirements of ANCI C62.41. In addition, separate surge protection is built into the electronic driver module
- **Daylight Sensing** – optional feature eliminates day-burners by sensing natural daylight levels. Turns fixture off at light levels approximately equal to sunrise and sunset
- **Occupancy Sensing** – small, built-in flush-mounted optional sensor detects movement in a 20-foot diameter circle and fixture dims to 30% power when no presence is detected
- **3 Drive Currents** – choose from 3 levels; 350 mA (most energy-efficient), 450 mA or 550 mA (best first-cost value)



2-Piece Hinged
Driver Box

Installations printed on driver box top



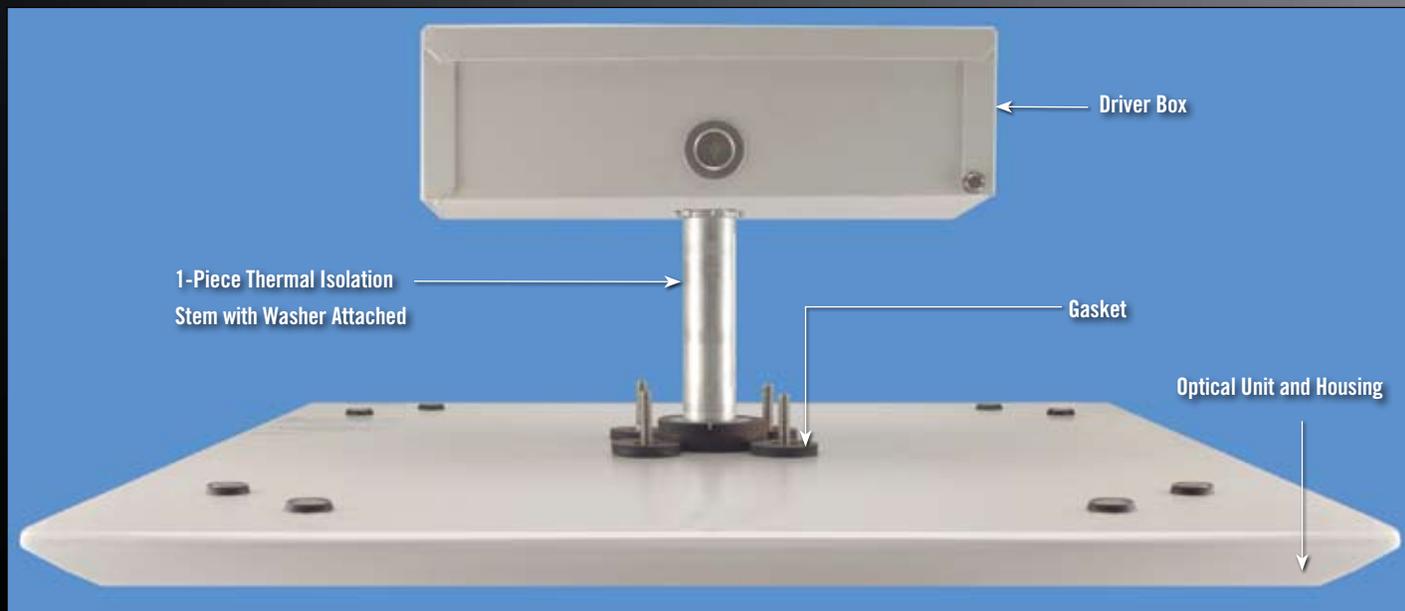
LED
Driver
Surge
Protector



Quick Connect Wiring



Flush Mount



1-Piece Thermal Isolation
Stem with Washer Attached

Driver Box

Gasket

Optical Unit and Housing

Uniquely Crossover – Generation 3 is Unlike Any Other

INTELLIGENT DRIVER

- Proprietary, state-of-the-art SmartTec driver technology provides for unsurpassed system efficiency, current control, temperature and surge protection.
- Fully encased and potted components in an aluminum housing.
- The industry's only IP68-rated for moisture and dirt resistance.

DRIVER HOUSING

- Even IP68 components shouldn't be submerged forever. Hinged, wet location driver box mounts above the canopy ribs to keep wiring and all electronic components safely away from trapped water and debris.
- Like the Scottsdale ballast, the Crossover driver is separated from heat generating optical unit to ensure a cool running fixture.
- Quick connect wiring and two conduit entry points with supplied close-off plugs provide for easy wiring connections
- High-density, corrosion-resistant, powder-coated aluminum construction provides for superior service life
- Easily accessible driver for simple service

SELF-DIAGNOSTIC INTELLIGENCE

- LSI's sophisticated two-way communication between the optical unit and driver ensures continuous monitoring of the product to reduce power when ambient temperatures reach extreme levels (e.g., during unusual operating conditions such as daytime operation in high temperature climates or markets where poor power regulation or brownouts are possible). This is done in continuously stepped sequence reducing light gradually.

TRILUME™ OPTICS

- Sealed glass lens, high-efficiency, precision-formed metal reflector and high-efficiency LED chips. Optical unit is safe from contaminants, ensuring long-term light output is not compromised
- Four distribution patterns; Symmetric, Asymmetric, Enhanced Symmetric and Focus

ULTRA -THIN, "BREATHABLE" SEALED OPTICAL HOUSING UNIT

- The industry's only water-tight, sealed IP65, IP66 & IP67 rated optical unit – Teflon® breather prevents temperature cycling from building up internal pressures and vacuums that can stress seals and components
- High-density, corrosion-resistant, powder-coated die-formed aluminum housing built for long life

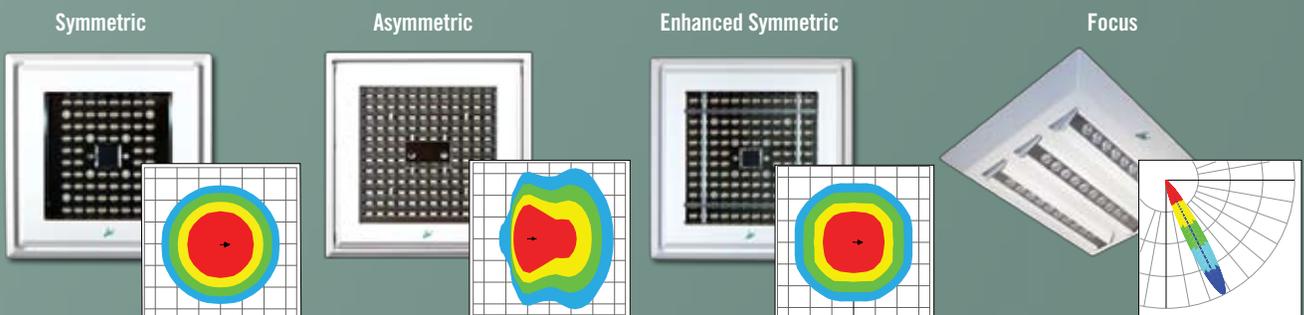
INTEGRAL HEAT SINK

- Patented integral flat blade heat sink design eliminates trapped dirt and grime to ensure the coolest running performance over the life of the fixture
- Designed into the aesthetic shape of the fixtures, not an add-on element that you want to hide. Downward facing location is the most effective for airflow and protection from the radiant heat of the sun

ENGINEERED FOR OPTIMAL THERMAL MANAGEMENT

- Thermal isolation stem protects optical unit from heat generated by the driver
- Cooling spacers provide additional air circulation, protecting the optical unit from heat radiated by the canopy deck
- Designed for extreme environments – not just "Average Nighttime Temperatures"

Teflon® is a registered trademark of DuPont™



Available with 64, 84, 104 or 128 LEDs depending upon required light levels

Available with 30 LEDs



Seeing is Believing

Have a Smart Vision and Focus on Performance

Offering superior and consistent uniformity of light helps to create a safer, more inviting environment for both customers and employees. With Crossover Generation 3 you can tailor your LED lighting specifically to meet your requirements. From low glare, high efficiency with the highest foot-candles at grade, to high impact visibility at a distance with Scottsdale perceived brilliance, or if you prefer additional vertical highlighting -- think Crossover. Once you see it, you'll believe it and we know you'll agree...the Crossover canopy solution is simply brilliant.



4 distribution patterns + 5 LED diode packages + 3 drive currents...
gives you 31 choices to meet your specific requirements



Crossover Gen 3 offers more choices to get the right amount of light,
in the right places on your site

Cross Over to the Easiest

Most canopy fixtures are cumbersome and time-consuming. Like the Scottsdale it is as easy as 1, 2, 3. Whether you have an existing canopy, Gen 3 is the least expensive LED canopy fixture.

Retrofits Made Scottsdale® Easy

Don't wait until you build a new facility to enjoy the benefits of LED. Whether you have a 2 x 2 box, recessed fixture or LSI Scottsdale, LSI has a simple solution for you to retrofit your existing sites with the Crossover Generation 3. All can be done in a matter of minutes –

- Quickest, cleanest installation possible
- No modifications, including no additional cutting or drilling of the deck required
- No additional wire harness work required
- Specification-grade sealant/adhesive supplied
- Quick connect wiring



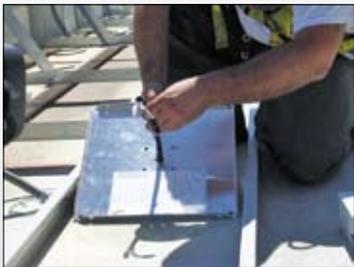
1. Remove existing Scottsdale fixture.



2. Apply specification-grade Crossover sealant to retrofit adapter panel (sealant and panel provided).



3. Insert Crossover fixture into the existing 4" hole & adapter panel.



4. Feed quick connect wiring through panel. Fit panel onto top of canopy deck and secure fixture to panel.



5. Feed quick connect wiring through 1-piece stem with attached washer, then screw stem onto fixture.



6. Open driver box and feed quick connect wiring through box. Secure box to 1-piece stem with lock nuts.



7. Make quick connect wiring connection inside box.



8. Attach existing conduit to driver box. Make necessary supply wiring connections inside the box. Close box.

Installation in the Industry

ing to install. Not so with the Crossover Generation 3!
are retrofitting an existing site or installing on a new
installation available today!

Flexibility at its Best

Upgrading your existing 2 x 2 or recessed fixtures to the Crossover Gen3 is easier than ever with Crossover Universal SuperKits. No need to remove the old housing, cut into the canopy or move the electrical.

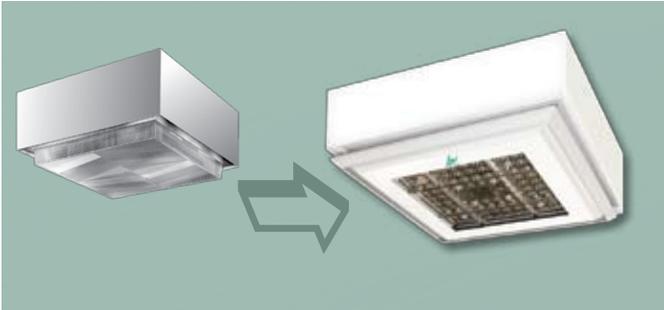
CONVERT YOUR 2 X 2 FIXTURE

LSI Masters®

LSI Dakota®

Whitway Spaulding Thunderbird, Riviera and Vision

Jet-Phillips Houstonian (SHO/RHO)



CONVERT YOUR RECESSED FIXTURE

LSI Richmond®

Whitway Civic (old style)

Whitway Civic (current style)

Jet-Phillips Recessed Icon



New Installations Made “Scottsdale Easy”



1. Using the template provided, drill 5 small holes in the canopy.



2. Align the optical unit, then push the 4 studs and wiring harness up through the holes.



3. From the top of the canopy, center optic unit studs into the 5 holes and secure optic unit to the canopy using supplied washers and nuts. Feed quick connect wiring through stem and thread stem onto fixture nipple. Position and secure stiffening brackets.



4. Thread stem to driver box and feed quick connect wiring through box.



5. Attach existing conduit to driver box and make necessary wiring connections inside the box before closing box.

The Real Crossover Value: Lowest Total Cost of Ownership

Although substantial energy savings make a compelling argument for crossing over to the LSI Crossover Generation 3, the real value only begins there.

Consider the total cost of ownership and the LSI Crossover Generation 3's true brilliance becomes fully illuminated. No other canopy lighting system compares:

- **Lowest initial cost** – as a vertically integrated manufacturer we can control and deliver the highest quality canopy fixture on the market at the best possible cost. With over 30 different options, we have a product to fit your budget.
- **Lowest cost of installation** – time is money. 2-piece hinged driver box, 1-piece stem and washer, plus quick connect wiring – all labor-saving features to ensure quick and easy installation, reducing your costs.
- **Best-in-Class performance** – Utilizing the latest high performance LED chips and components to deliver the lighting performance you want – the optical efficiency you need.
- **Lowest maintenance costs** – LED technology means no lamp replacements which equals significantly lower maintenance costs
- **Longest operating life** – proprietary SmartTec technology ensures intelligent two-way communications between the driver and light engine to provide the highest level of control and component protection in the industry
- **Complete peace-of-mind reliability** – engineered and built to last with virtually no maintenance. Tested to the highest standards.

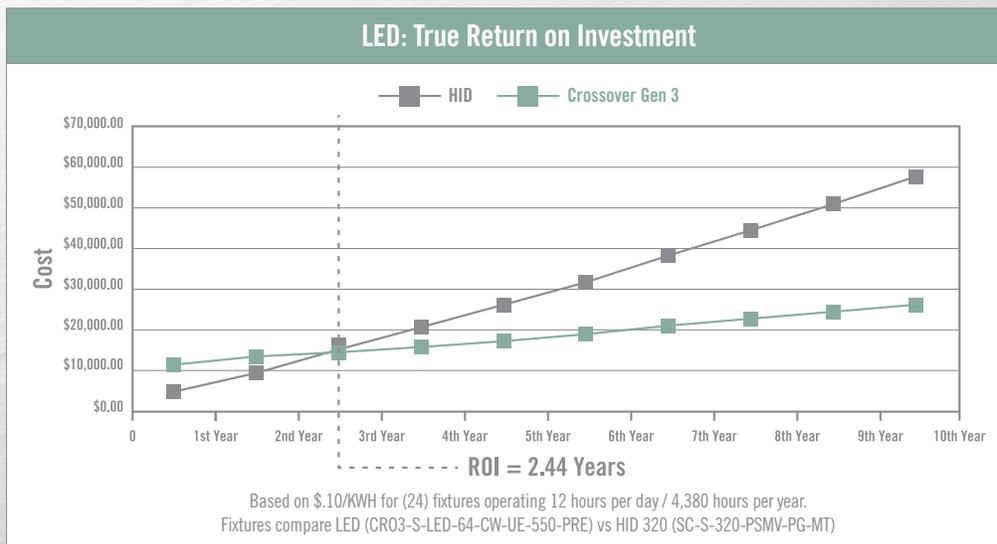


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Multiple light distribution choices that produce the highest quality illumination available today with the lowest installation, maintenance and energy costs all contribute to the lowest overall cost of ownership of any LED canopy lighting system – **When you add it all up we think you'll agree...the Crossover Generation 3 is simply brilliant.**



Feature	Benefit	Value	Generation 3	Others
Energy-efficient LED technology	Lower energy consumption: up to 90 delivered lumens per watt at 350 mA	Significant cost savings over HID lighting	✓	✓
Integrated motion sensors	Provide “just right” lighting based on environmental needs	Improved efficiency	✓	✓
Automatic light sensors (Integral photocell)	Gradual lighting transitions at twilight, fixture shut-off during daylight	Improved energy efficiency	✓	✓
Proprietary die-formed single blade heat sink	No exposed heat sink fins to trap dirt and increase fixture temperatures	Lower operating temperatures translate into longer life and better illumination	✓	
Intelligent thermal protection	Heat sensors reduce power continuously and automatically	Continuous monitoring optimizes power consumption, protects driver and optics	✓	
Wet Location driver box stays above deck surface	Eliminates contact with water “pooling” on canopy deck	Protection of electronic components, longer life	✓	
Customized Scottsdale® retro-fit kit	Eliminates need for cutting into canopy	Easier, cleaner, less expensive installation	✓	
Unique reflector technology	Three reflector variations to customize illumination to suit each application	Greater optical control ranges from at the edge of the canopy cut-off to brilliant “high brightness” reflector pattern	✓	
IP67 sealed, tempered glass, breathable optical unit	Protects LED circuitry from moisture, dirt, impact and internal pressure build-up	Longer life and better performance	✓	
Directional optics	Increased illumination control	Highlight specific display locations or extend beyond canopy drip line	✓	
Integrated fixture components	Maximum compatibility and communication between driver controls and fixture	Consistent performance and peace of mind	✓	
Industry-leading customization: 3 drive-currents, 3 ambient distribution patterns, Focus fixture with adjustable bars for accent lighting	Maximum light control	Increased lighting options allow optimum site illumination at lowest possible energy cost	✓	
Industry's most tested and certified fixtures	Ensures performance and reliability	Lowest cost of ownership	✓	



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A Company with a *Smart Vision*

Leading Today > Lighting Tomorrow®

