

# Option guide

Use this guide to help determine when to use each of the Light Corporation options

## Lamp options:

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### Fluorescent lamps:

Fluorescent lamps have the following advantages:

Efficient, fluorescent lamps can cost significantly less to operate over their lifetime than incandescent lamps.

Life ratings range from 6000 to 24,000 hours based on the industry standard of burning 3 hours per start.

Fluorescent lamps are available in a wide range of sizes, shapes, color performance, and wattage ratings.

**T8 tri-phosphor lamps:** Standard lamp in the VT and UCT task lights.

- The T8 tri-phosphor (1" diameter) lamp is up to 20% more efficient than the standard T8 or T12 lamps.
- Average life of 20,000 hours - means low lamp replacement and labor cost.
- Cooler operation - compared to halogen or incandescent lamps, reduces cooling costs.
- CRI (color rendering index) of 75.
- Color temperatures available: 3000K, 3500K and 4100K. 3500K is the Light Corporation standard. 3000K has a warmer look, similar to the warm white lamp. 4100K has a cooler look, similar to the cool white lamp.
- All T8 lamps are Ecologic lamps which have all the above standard features with the addition of a low mercury content.

**T5 fluorescent lamps:** Standard lamp in the MT5, A5L, T5L and IT task lights.

- The T5 (5/8" diameter) lamp has all of the advantages of the T8, but packs it into a more efficient package.
- Average life of 16,000 hours - means low lamp replacement and labor cost.
- Cooler operation - compared to halogen or incandescent lamps, reduces cooling costs.
- CRI (color rendering index) of 85 - most color accurate fluorescent source available.
- Color temperatures available: 3500K and 4100K. 3500K is the Light Corporation standard.
- The T5 utilizes an electronic ballast only.

**T2 fluorescent lamps:** Standard lamp in the T2L task light.

- The T2 lamp is 1/4" diameter.
- Average life of 8,000 hours.
- CRI (color rendering index) of 80.
- Color temperatures available: 3500K and 4100K. 3500K is the Light Corporation standard.

**T5 high output lamps:** Standard lamp in the AL3, AL5, AL16 and ITA ambient lights.

- Same features as the T5 lamps.
- Produces about 45% more initial lumens than the standard T5 lamp of the same size.

### Compact fluorescent lamps:

Compact fluorescent lamps have the following advantages:

Energy cost savings of up to 75% vs. incandescent lamps of comparable light output.

Lamp life of up to 13 times longer than standard incandescent lamps.

High light output comparable, and in some cases exceeding, incandescent lamps.

**13 watt compact fluorescent lamps:** Standard lamp in the FT13 and JU personal task light, and the CSL task light.

- Average life of 10,000 hours.
- CRI (color rendering index) of 82.
- Available in 3500K.

**18 watt compact fluorescent lamps:** Standard lamp in the HU personal task light and optional in the CSL task light.

- Average life of 10,000 hours.
- CRI (color rendering index) of 80.
- Available in 3500K.

**20 watt compact fluorescent lamps:** Standard lamp in the FT20 personal task light.

- Average life of 6,000 hours.
- CRI (color rendering index) of 82.
- Available in 2700K.

**40 watt compact fluorescent lamps:** Standard lamp in the AL3B ambient light.

- Average life of 20,000 hours.
- CRI (color rendering index) of 82.
- Available 3500K.

**55 watt compact fluorescent lamps:** Standard lamp in the OAL ambient light.

- Average life of 12,000 hours.
- CRI (color rendering index) of 82.
- Available 3500K (standard) or 4100K (optional).

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## Ballast options:

### Magnetic Ballast:

- Standard in the CSL task lights and the FT13 and JU personal task lights.
- A magnetic ballast uses a “core & coil” assembly to transform electrical current to start up and operate fluorescent lamps.

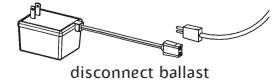
### Electronic Ballast:

- Standard in the MT5, VT, UCT, A5L, T5L, IT, and T2L task lights, the HU personal task light and all of the ambient lights.
- Optional for the CSL task lights.
- Operates at a cooler temperature (than magnetic) thus decreasing energy costs.
- Minimizes flickering caused by voltage fluctuations associated with copiers and laser printers.
- Eliminates interference with VDT through the omission of EMI (electro magnetic interference).
- Due to their solid state construction, they eliminate humming (audible noise) often associated with magnetic ballasts.

Normal power factor electronic ballasts are standard in all the linear task lights; for a more utility friendly lighting system, upgrade to a **high power factor / high performance electronic ballast**. High performance electronic ballasts have all the same features PLUS the current draw when using HPF is significantly lower, thus making it possible to put less lights on a circuit and reducing installation costs.

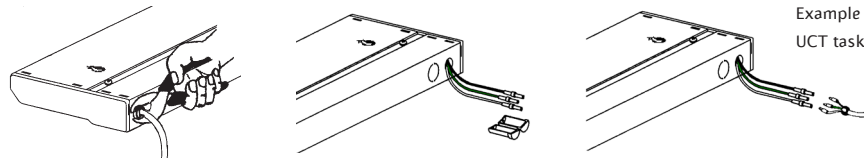
## Cord options:

- 9' black, 90° southwest (sw) plug rotation is the standard cord in the Mt5, VT, UCT, A5L, T5L IT, and T2L task lights, and the AL5, AL3, OAL-P and ITA ambient lights.
- 9' black straight is the standard cord in the CSL task light and the AL16 and OAL-F ambient lights.
- 9' black straight is optional on the MT5, VT, UCT, A5L, T5L, IT and T2L task lights, and the AL5, AL3, and ITA ambient lights
- The FT13, JU, and HU personal task lights have a cord / ballast quick connect feature which allows the cord to be easily routed behind work surfaces.
- Cord colors are available on the straight cord only. Colors available: gray and neutral.
- Chicago Code cord is available in black only with a straight or sw plug rotation.



**Field Interchangeable Cord (FIC)** is a 9' cord with either a straight plug or 90° sw plug which allows the end user to change the cord location from a standard right hand exit to a left hand exit in the field.

- Specify when electrical configuration of office may vary, or outlet location has not been determined.
- This option is available in the VT, UCT, A5L, and T5L task lights only.
- This option is not available on the VT18, VT22 or UCT18 task lights.
- This option is not available on the MT5, IT, T2L and CSL task lights or the personal task and ambient lights.



Example of FIC on the VT task light  
UCT task light cord exits from end of fixture

**Hardwire** option allows the user to wire the fixture to power source.

- This option is available in the MT5, VT, A5L, UCT and T5L task lights only.
- This option is not available on the IT, T2L and CSL task lights or the personal task and ambient lights.
- Wired for 120v 60hz. Pigtails are approximately 12" long.

### Cord managers:

- Available as options on all product lines.
- CM1 & CM4 kits are only available in white.
- CM2 & CM3 kits are only available in black.

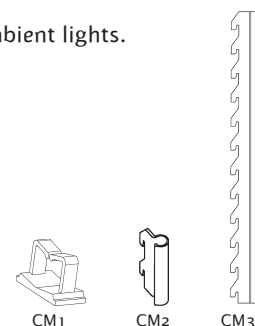
**CM1:** Two horizontal cord managers- useful when managing cord behind the fixture.

**CM2:** Two 2" vertical cord managers- used to manage cord along vertical standard.

**CM3:** One 12" cord cover- used to cover cord along vertical standard.

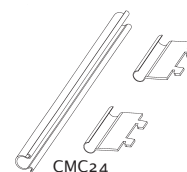
CM2 and CM3 fit most panel standards with 1" centers, call for availability.

**CM4:** Bag of 50 horizontal cord managers.



### Cord cover:

- Available as options on all product lines.
- Used to cover cord along a furniture panel.
- Cord cover kit consists of a 24" cover with 2 CM2 or 48" cover with 4 CM2.  
-fits most furniture panel standards with 1" centers, call for availability.
- Cord covers are available in black (209), gray taupe (228), light tone (063), stone gray (062) and stucco (073).



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## Cord options Daisy Chain:

**Daisy Chain** is the process of powering a fixture from the preceding fixture and reducing plug outlet use to one.

- This option is available on the MT5, VT, UCT, A5L, T5L, and T2L task lights only.
  - Maximum of 5 fixtures can be daisy chained together on the MT5 and T2L task lights.
  - Maximum of 10 fixtures can be daisy chained together on the VT and UCT task lights.
  - Maximum of 8 units can be daisy chained together on the A5L and T5L task lights.
  - Cord managers are supplied with each daisy chain task light.
  - The VT, UCT, A5L, T5L and T2L daisy chain task lights are supplied with a CM1 kit (see previous page for drawing).
  - The MT5 daisy chain fixtures are supplied with 2 cord clips (see below for drawing).
  - This process is allowed in most cities (check your local code) but its application is carefully regulated due to the risk of overloading a circuit.
  - Daisy chain cords are available in black only.
- **Independent Switching** - standard daisy chain configuration. With this option each fixture runs independently of the first fixture in the line and must be turned on or off individually.
  - **Master Control** - optional daisy chain configuration and must be specified using MCDL. With this option, the first unit in the line controls the power of all down line fixtures. Each down line fixture can be switched independently once the power is supplied. Benefit of using the master control option is that all down line fixtures can be left on all the time, thus allowing the user to only have to switch on/off one fixture (the fixture with the power cord).

## MT5 task lights

### DCP & MCDL

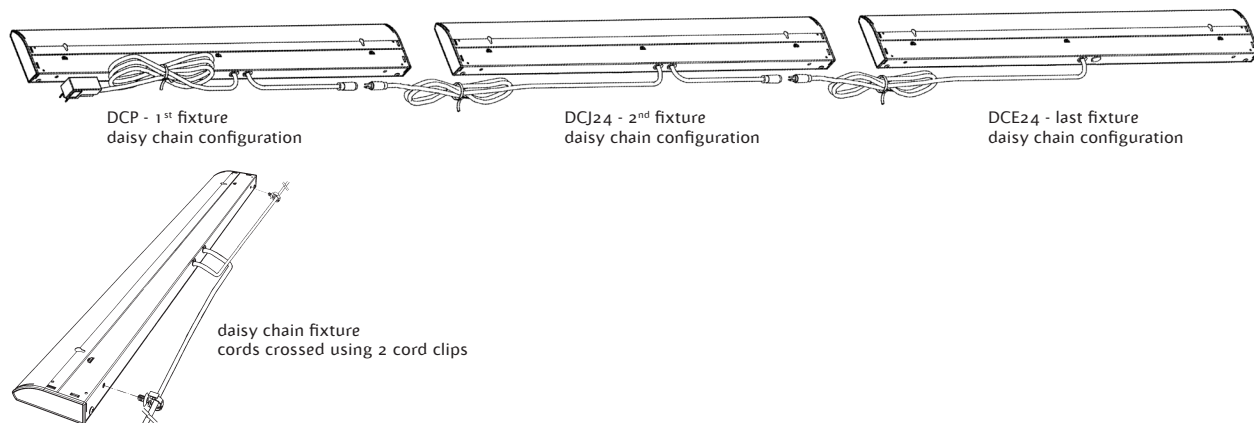
- This is the first fixture in the line and is supplied with a 9' SJT, 18 gauge, 90° sw rotation fused plug power cord and a 7" jumper cord.
- Both cords exit from the center of the fixture.
- If power outlet requires cord to be routed left, the jumper and power cord will cross in back of the fixture; use the provided cord clips to secure the cord in place.

### DCJ

- Fixtures connecting the power and last fixture in a daisy chain arrangement are referred to as "jumper" fixtures.
- This fixture is supplied with a 24", 45", 56" or 76" jumper with male plug and a 7" jumper cord with receptacle.
- Both cords exit from the center of the fixture
- The jumper length must be specified on the order using code DCJ24, DCJ45, DCJ56 or DCJ76.
- Contact customer service if assistance is needed in determining the length of jumper needed.

### DCE

- This is the last fixture in a daisy chain arrangement and supplied with a 24", 45", 56" or 76" jumper cord with male plug.
- The end unit jumper length must be specified on the order using code DCE24, DCE45, DCE56, or DCE76.
- The jumper cord exits from the center of the fixture.



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## Cord options Daisy Chain:

### VT and UCT task lights

#### DCP & MDCDP

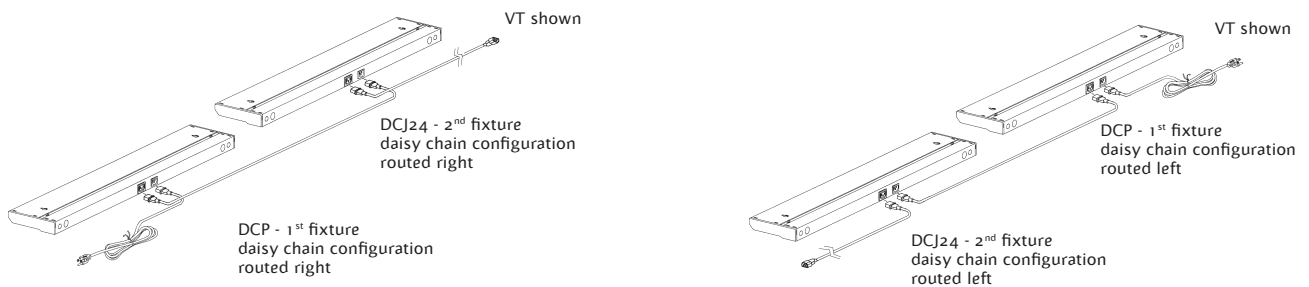
- This is the first fixture in the line and is supplied with two business machine receptacles, one receptacle male and the other female and a 9' SJT, 16 gauge power cord with a straight plug and mating receptacles.
- The daisy chain option for the VT and UCT task lights is not available when specifying a Chicago cord.

#### DCJ

- All down line fixtures in a daisy chain arrangement are referred to as "jumper" fixtures.
- This fixture is supplied with two business machine receptacles, one receptacle male and the other female and a jumper cord with mating receptacles.
- When ordering the "Jumper" fixture for the VT or UCT task light you must specify the length of jumper cord. This is determined by adding the length of the two task lights, plus the distance between the overhead units, divide that number by 2 and then add 6".
- Jumper cord lengths available: 42", 54" or 78"

#### Example

When daisy chaining two 36" fixtures with a 12" space between the overheads, the formula would be:  $36 + 36 + 12 = 84 / 2 = 42 + 6 = 48$ ". You should request a 54" jumper cord.



### A5L, T5L, and T2L task lights

#### DCP & MDCDP

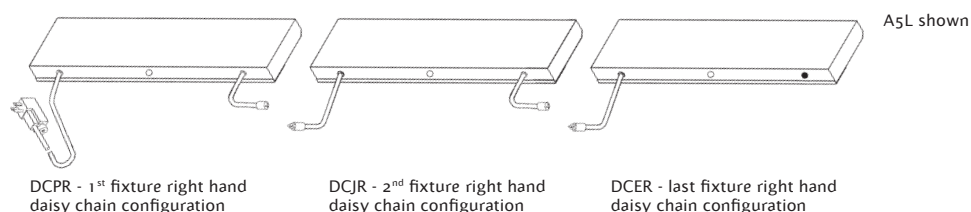
- This is the first fixture in the line and is supplied with a 9' SJT, 18 gauge, 90° sw rotation fused plug power cord and a 7" jumper cord.
- The exit location (R or L) of the power cord must be specified using order code DCPR or DCPL (for master control MCDPR or MDCPL).

#### DCJ

- Fixtures connecting the power and last fixture in a daisy chain arrangement are referred to as "jumper" fixtures.
- This fixture is supplied with a 24" jumper with male plug and a 7" jumper cord with receptacle.
- The exit location (R or L) of the 24" jumper cord must be specified when ordering jumper fixtures using code DCJR or DCJL.
- If the exit location of the power cord was specified as right hand, then all jumper fixtures should be specified right handed as well (same rule for left hand run).
- Maximum distance between 2 A5L fixtures 16".
- Maximum distance between 2 T5L fixtures 20".
- Maximum distance between 2 T2L fixtures 18".

#### DCE

- This is the last fixture in a daisy chain arrangement and supplied with a 24" jumper cord with male plug only.
- The exit location (R or L) of the jumper cord must be specified when ordering the end unit using codes DCER or DCEL.
- If the exit location of the power cord and jumper fixtures were specified right hand, then the end fixture should be specified right hand as well (same rule for left hand exit run).



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## Occupancy sensor option:

### Operation

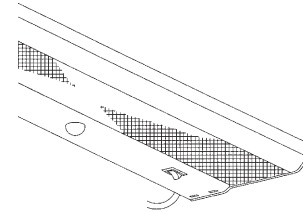
Light Corporation's Occupancy Sensor (OS) uses a passive infrared (PIR) sensing technology that turns lights on and off based on movement /changes in infrared energy (moving body heat) within the coverage area. Once the coverage space is vacant and the time delay elapses (factory set at 15 minutes), the lights will turn off. This slim low profile sensor is mounted on the bottom rear of the fixture and uses an optical lens to monitor movement up to 6 feet away. Sensors must directly "see" motion of an occupant to detect them, so careful consideration must be given to sensor placement. Avoid placing the sensor where obstructions may block the sensor's line of sight.

### OS Benefits

- Reduces energy costs by turning lights off when not needed.
- Convenience for the user.

### Specification Guidelines

- Specify when energy cost reduction is a priority.
- The OS option automatically includes a high power factor electronic ballast.
- Available on the MT5, VT, UCT and T5L task lights only.



### User Guidelines

- Room temperature affects the operation. The sensor is constantly monitoring the area and updating the sensor with new data / "pictures". This minimizes the effect of room temperature changes and hot spots, such as windows. Sudden changes in temperature can cause the sensor to trigger.
- Occupant Motion – The sensor senses motion along the horizontal axis of the lens. Small motions that do not cross the axis will not be sensed and the unit will "time out".
- Ambient air movement – The PIR technology senses change in temperature. Under higher temperature operation (95°F) moving air can effect the operation.
- Field of view has a large impact on the sensor's ability to function properly. The occupancy sensor must be in range and view of the person to be detected. This typically works best on exposed areas of skin, as clothing can block thermal radiation from your body. Hands, arms, head and neck are the best radiators of this signal. The white dome on the sensor is designed to focus signals to the sensor. If the user can see the sensor well, and is in range of the sensor, then it is monitoring that person. Items in the workstation (i.e.chairs) can limit the field of view. Remember, more field of view means higher signal quality and reliability.

### Troubleshooting

- Given the above considerations, the fixture with the sensor should be placed where it will function most effectively. It should be away from heating, ventilation & air conditioning vents and ducts. To prevent a passerby from triggering the fixture, it should be placed away from looking across entry ways, unless out of the sensor range. Obstacles should be eliminated so that motion can be sensed.
- **Important**, there is an initial warm-up period. It may take up to a minute before the lights turn on due to a sensor warm-up period required during initial power-up. This occurs during installation, after a lengthy power failure, or if the fixture has been switched off for a period of time.

### Energy Savings and Cost Analysis Calculations

Cost per KWHf	\$ .08	Cost per week	\$ .15	Controlled hours per week	24
Task light watts	40	Cost per year	\$7.60	Controlled savings	50%
Hours per week	48	No. of offices (2 per office)	500	Savings per year	\$3,000.00
Typical cost per year	\$7,600.00				

### Savings per sensor per year \$3.80

Hours per week assumes typical work week.

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## Dimming options:

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- All dimming options include the high power factor electronic ballast option.
- Specify one of the dimming options when light output control is a factor.

### **DIM3:** Tri Level Dimming

- Provides light output levels of 100%, 78%, and 53%.
- Controlled by a black rocker switch.
- Available as option on the VT and UCT task lights only.

### **MDIM:** Multi Level Dimming

- Provides light output levels from 100% on to 30% on in 6 discreet steps.
- Controlled by a black rocker switch.
- Available as an option on the VT task light only.

## Lens options:

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**Prismatic lens** has a multi-sided prism design to reflect light in all directions.

- This lens is successful in reducing glare through light dispersion.
- Standard lens on the MT5, VT, T5L, UCT, and CSL task lights.
- Not available on the A5L and T2L task lights.



**Linear prismatic lens**, also called batwing, (BW).

- An acrylic lens with a pattern that is made of two-sided prisms. The pattern is composed of ridges and valleys that run perpendicular to the user. When the light from the source passes through the pattern, it is directed perpendicular to the user. The purpose of directing the light perpendicular to the user is to reduce the amount of reflected light that bounces off the work surface, and back up into the eyes of the user.
- The BW is the standard lens on the A5L, IT, and T2L task lights
- The BW is available as an option on the MT5, VT, T5L, and UCT task lights

