PETER MEIER INC
A Manufacturing Company

TotalLight™ Manual

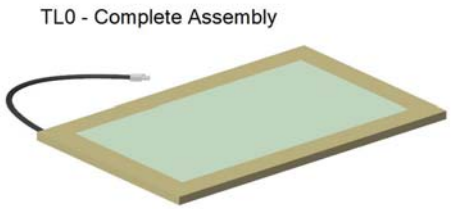
Section 1 – Product Description

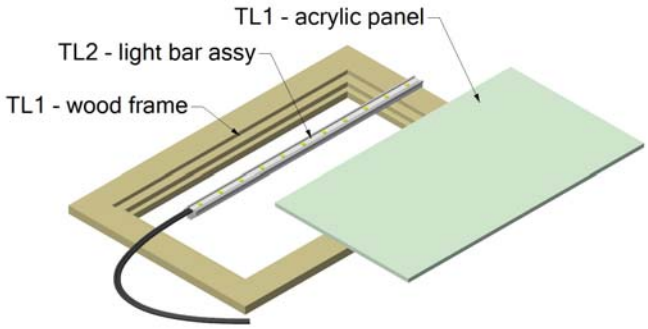
Total Light is an assembly of components made of wood, acrylic, aluminum and 12 volt LED light strips that replaces the standard plywood or particleboard floor of face frame style wall cabinet. The assembly is installed into new cabinets in the fabrication process and it is not intended as a retrofit to existing cabinets.

A cabinet with Total Light provides illumination upwards (Interior Lighting) and down towards the countertop (Task Lighting). Cabinets fitted with glass doors particularly benefit as the contents stored inside can be illuminated from the bottom in addition to common top mounted lighting.

The assembly is comprised of two segments, the frame and the lighting. The following prefixes are used in the component coding:

TL0 – The complete assembly
TL1 – Components included in the frame
TL2 – Components included in the lighting





Section 2 – Target Markets

Companies that build cabinets and furniture, whether large OEM or smaller distributor accounts, are target customers for Total Light. Traditionally, cabinet lighting is provided by an electrician or kitchen dealer once the cabinets are installed. Typical lighting elements are strip lights mounted underneath the wall cabinets to illuminate the countertop, "puck" style lights mounted to the ceiling of wall cabinet or corner strip lights mounted behind the face frame to illuminate the cabinet interior. These installations are highly variable in cost and quality and the revenue from these accessories goes to parties other than the cabinet mfg.

Most Important to Realize:

With the Total Light & Cabinet concept, the dollar value and sales of the installation is transferred from the aftermarket / kitchen dealer / electrician to the kitchen cabinet producer.

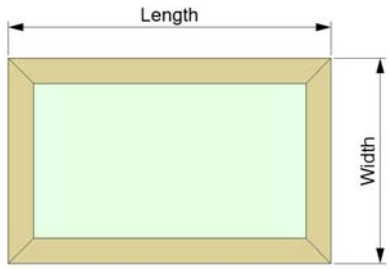
The increased cost of cabinets with the Total Light solution installed in new home construction is mitigated by the cost of the cabinets being spread over the life of the mortgage.

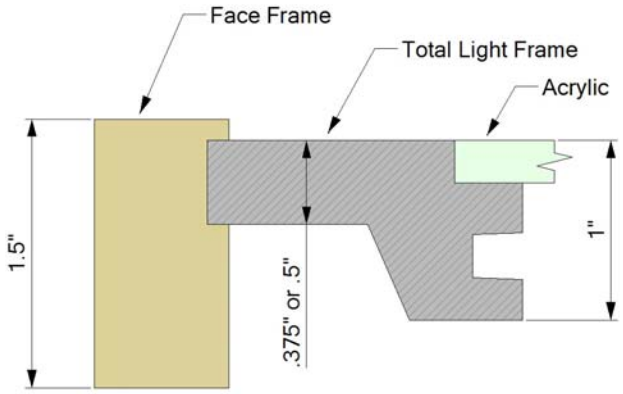
Section 3 – How To Specify

As mentioned in section1, a Total Light assembly replaces the normal floor of a face frame wall cabinet. The majority of face frame construction uses bottom rails of a minimum 1.5” width. The Toatl Light frame is only 1” thick so it will fit in the cavity behind the face frame.

Four pieces of information need to be supplied to order a Total Light assembly:

- Length of floor
- Width of floor
- Thickness of floor
- Species of material





There are two options for the floor thickness, 3/8” and 1/2”. These refer to the width of the dado that would be in the cabinet sides, back or frame. The lip of the Total Light frame is under sized by 1/32” to allow for fit tolerance.

There are three options for the wood species: Cherry, Hard Maple and Red Oak.

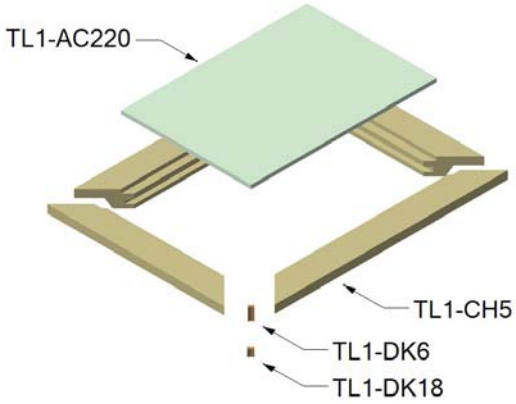
Section 4 – Frame

The Total Light frame is made of solid Cherry, Hard Maple or Red Oak. The cross section dimension is 1” x 1.75”. The frame assembly has mitered corners which are joined with glue and two plastic dovetail keyways at each corner. The profile of the frame has a top rabbet to hold the acrylic top and a center groove to accept the aluminum light bar. The center groove also serves as a conduit for the 12 volt power cord as it exits through the rear of the frame.

The top acrylic panel is .220” thick and has a frosted “P95” finish on one side.

In the example the code numbers represent:

Code	Description
TL1-AC220	Acrylic sheet .220” thk.
TL1-CHR5	Cherry frame with 1/2” lip
TL1-DK6	6mm dovetail key
TL1-DK18	18mm dovetail key



Section 5 – Lighting

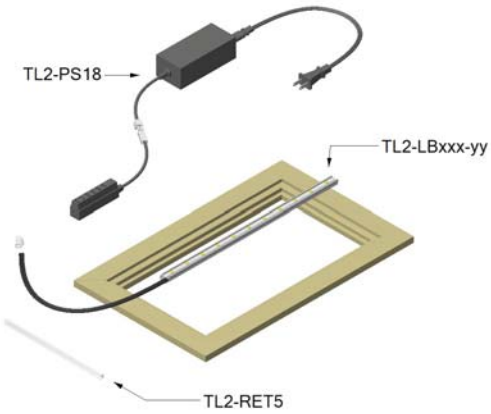
The primary element is an assembly called the light bar. It consists of an aluminum extrusion, which holds the LED strips and is inserted into the front of the wood frame assembly by means of a barbed tab. LED strips mount to the top and bottom of the extrusion and are held in place by an adhesive backing.

The bottom strip is protected from being touched (and kept in place if the adhesive should fail) by a thin poly carbonate diffuser strip that slides into the extrusion.

The top LED strip is covered by the acrylic panel that is part of the frame assembly. The top and bottom LED strips are connected via a 20 AWG cable with heat shrink tubing covering the soldered joints. A similar cable 36” long feeds power to the lower LED strip on the left side. This cable will channel through the left side of the wood frame assembly and exit through a 1/4” hole in the back.

Connections to additional linking cables or the transformer junction blocks are made with AMP Mate-N-Lock 2 pole plugs and receptacles. The male AMP plugs are shipped loose with the light bar and are installed after the power cord has been threaded through the back of the wood frame and through any other holes that are made to channel the cabling.

Code	Description
TL2-PS18	18 Watt power supply and junction block.
TL2-LBxxx	Light bar assembly xxx refers to length in mm and yy refers to wattage.
TL2-RET5	Wire retainer 5mm.



LED strips come in 5 foot lengths comprising of (15) circuit sections. The strips can only be cut at the ends of these sections which are 4” long. Each section consumes 1 watt of power which translates into 3 watts per foot. The light output is xxx lumens, Warm white. They are rated at 50,000 hours and are made by Nichia which is recognized as the world leader in LED technology.

Section 6 – Packaging

Acrylic is inserted into the frame.

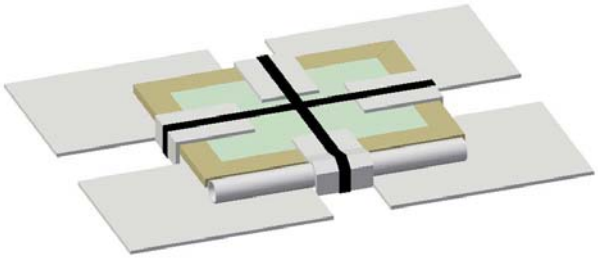
Light bar with wire is inserted into a cardboard tube.

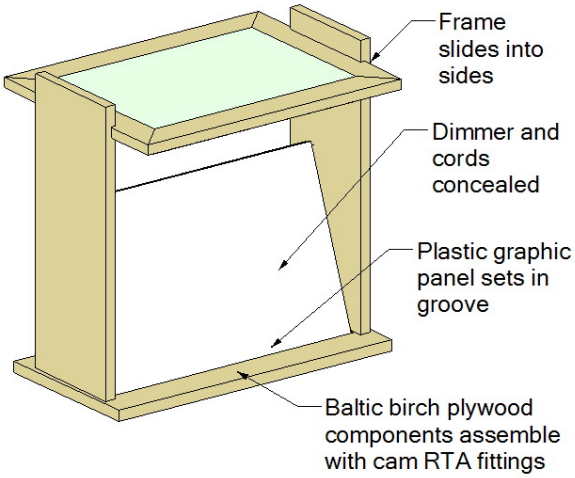
A plastic bag with the plug end for the wire, (2) adhesive wire clips and the wire channel retainer will be taped to the TL assembly.

The frame, acrylic and light bar tube will have identifying code numbers to keep the set matched when they are separated.

The frame and tube are strapped to a cardboard sheet with a perimeter margin of 2”-3” for protection in shipping.

Up to 5 TL assemblies will go into a cardboard box.



Section 7 – Sales Tools

The sales demo kit consists of a fabric briefcase with a TL assembly, transformer with cord and remote dimmer, a countertop stand, a features graphic card and a Phillips screwdriver. A presentation setup can be done in @ 3 minutes as the components of the stand fit together with pre-inserted dowels and RTA screws. For a short demonstration the screws are not required as the components will stay together adequately. The demo kit serves as a model to show the actual countertop display that will be offered to dealers.