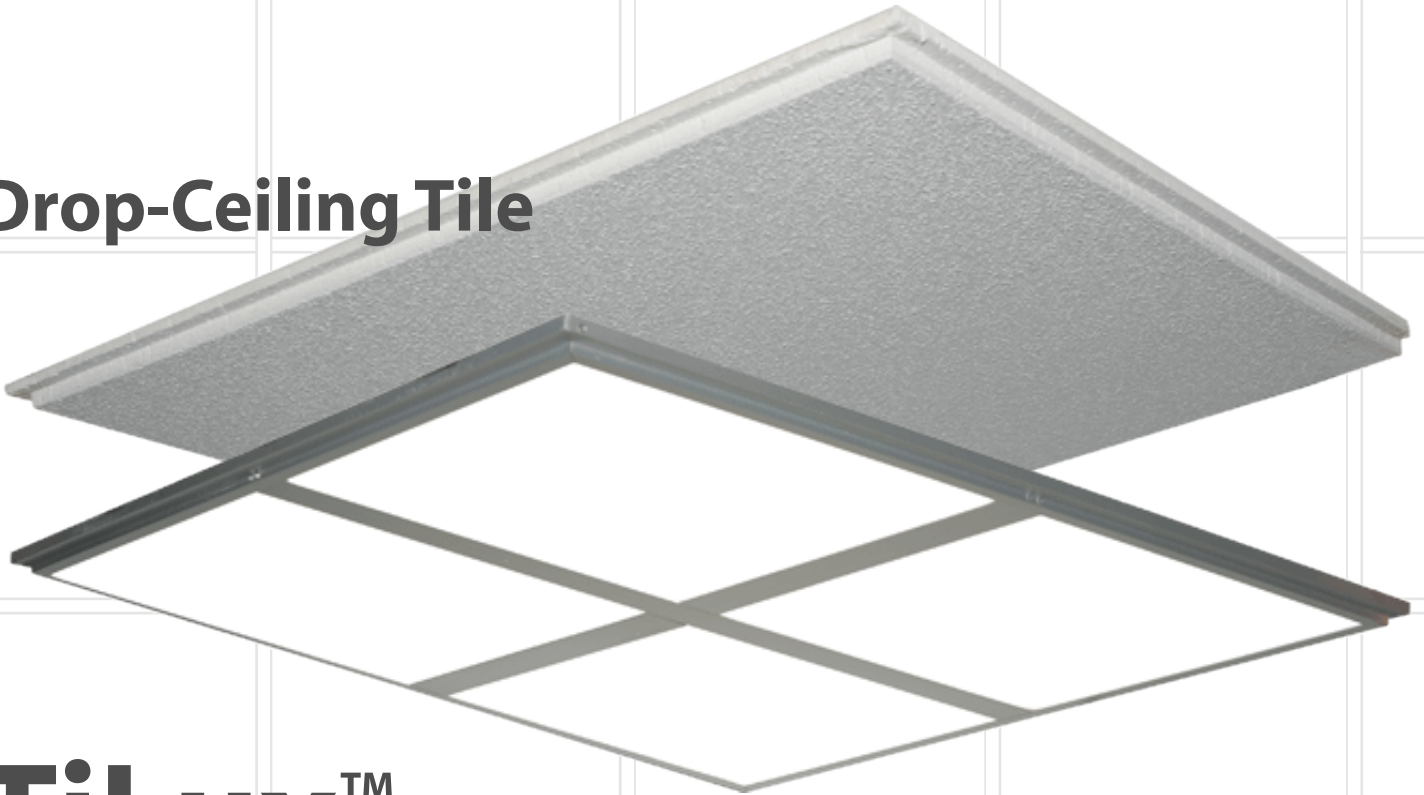


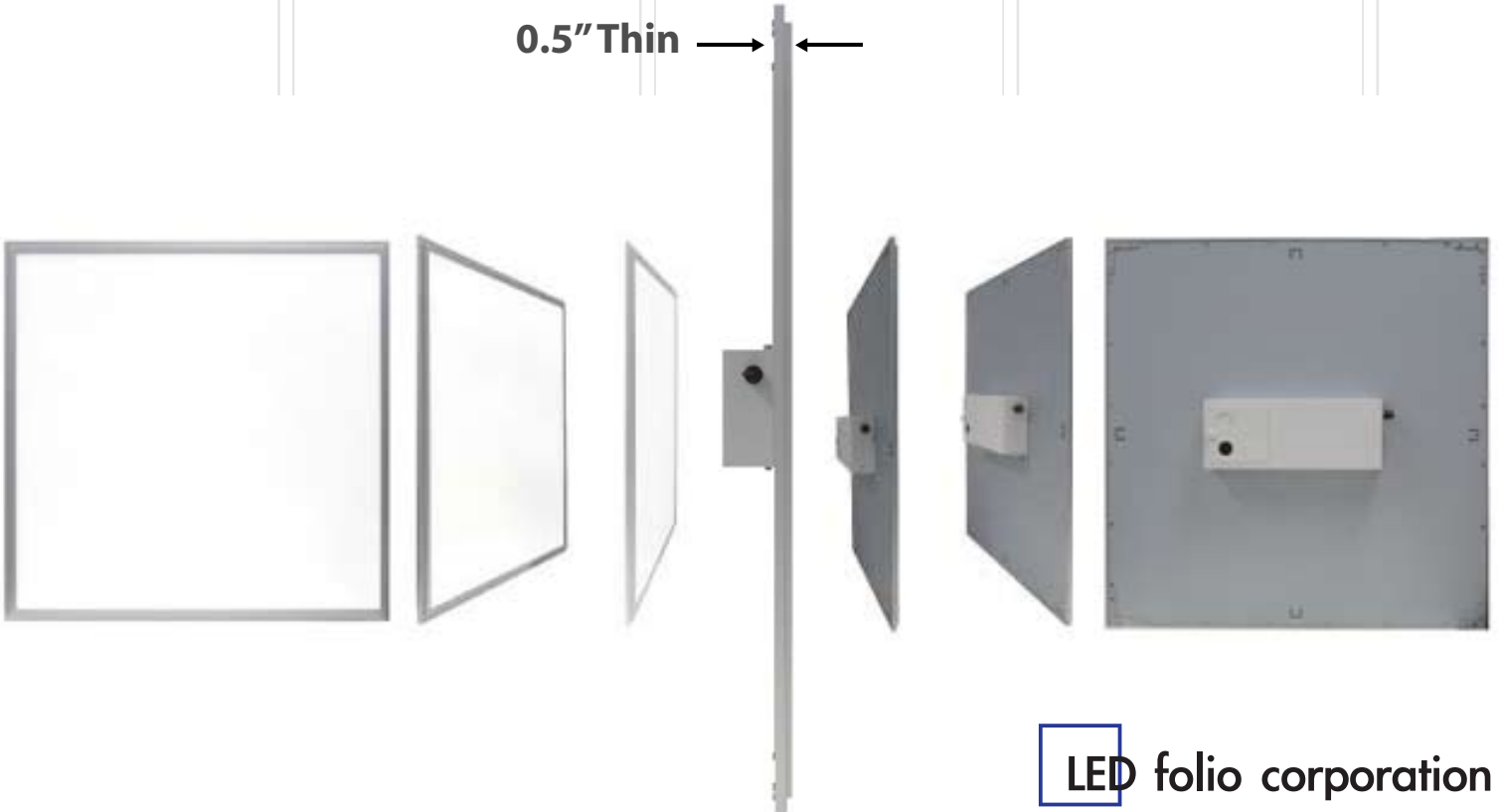
**Drop-Ceiling Tile**



**TiLux™**

**Drop-Ceiling Tile  
emits over 4,000 lumens**

0.5" Thin → ←



# TiLux™ Technology



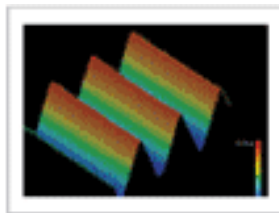
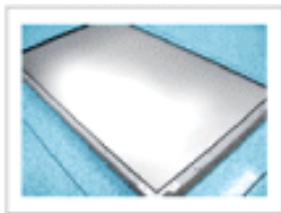
LED folio has pending patents for its innovative adaptation of LCD BLU technology to general lighting - in the designs, components and fixture parts.

## Did you know LCD displays contain thin lighting panels?

LCDs require a lighting panel called the LCD BLU (Back Light Unit).

LED folio utilizes the latest in LCD BLU technology for its lighting applications.

## Strategic OEM Partner



LED folio has an exclusive strategic alliance with WooYoung Co. Ltd., ([www.WooYoung.co.kr](http://www.WooYoung.co.kr)) a global leader in LCD BLU technology. WooYoung Co. supplies \$ 300+ million in LCD BLUs worldwide to clients such as Samsung Electronics. WooYoung, with 2,300+ employees, has the technological expertise and manufacturing capabilities to provide the infrastructure necessary to ensure LED folio products are top-of-the-line in quality and reliability.

# TiLux™ LED Lighting Technology



## Light Source - White LED

High efficiency LED, over 60 lumens per watts  
CRI : 85-90  
Color Temperature: 3200~6500°K



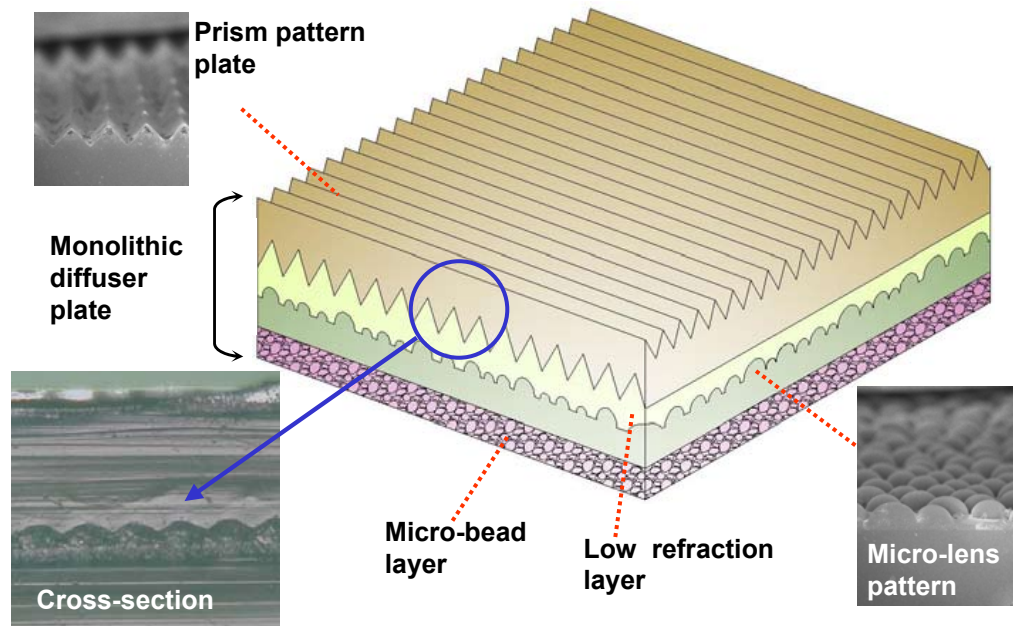
## Light Guided Panel (LGP)

LEDs are side mounted to create light uniformity and to eliminate glare

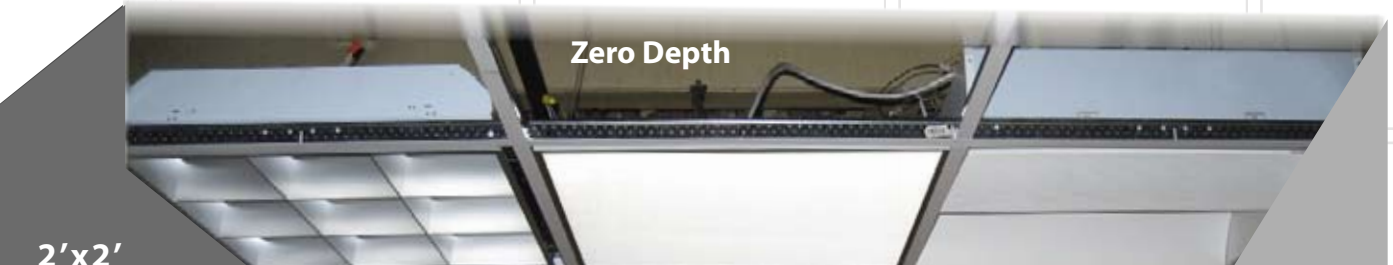


## Prism LGP Technology

LED folio products use the industry's most advanced LGPs (Light-Guided Panel). They provide superior efficiency and light uniformity utilizing it's patented prism LGP technology. The fixture efficiency is about 90%, or 56 lumens per watt - compared to an average fluorescent fixture with 50 - 60% fixture efficiency.



# Comparison Table



2'x2' Lighting Fixtures	Direct Fluorescent	TiLux™	Indirect Fluorescent
<b>Illuminance Measure at 6'</b>	33 FC	35 FC	35 FC
<b>Initial Lumens</b>	5,700	4,095	8,500
<b>Fixture Efficiency*</b>	71%	89%	51%
<b>Coefficient of Utilization</b>	0.7	0.9	0.7
<b>Wattage</b>	64 watts	65 watts**	100 watts
<b>Initial Efficiency</b>	89 L/W	63 L/W	85 L/W
<b>Final Efficiency</b>	<b>64 L/W</b>	<b>56 L/W</b>	<b>43 L/W</b>
<b>CRI</b>	80-85	85-90	80-85
<b>Life Time</b>	7,000 hours	70,000 hours	10,000 hours
<b>Fixture Height</b>	4"	1"	5"
<b>Typical MSRP</b>	\$125	\$280	\$320
<b>Cost of Light (\$/ML hr)</b>	1.64	1.51	2.40

**TiLux™ More Elegant, Most Efficient, Best Quality, Lowest Cost of Light**

\* Includes Plenum temperature factor

\*\* The value was measured at 65 watts (dimmed to 86% power) for a comparative illuminance (at 6') test.

# Estimated Annual Cost Saving Worksheet

Use this 6-part calculator to determine the estimated annual energy cost savings by retrofitting with TiLux™. This estimated annual cost saving determines the Simple Payback and the Return On Investment (ROI) using TiLux™ for retrofits or new construction. This is an example metric when considering lighting upgrades for a retrofit or a new facility but as with any simple, first level economic analysis. This cost saving worksheet has does not consider the Time Value of Money.

## 1. Compute the total energy (kilowatts, kW) saved by upgrading your fluorescent fixtures to energy saving TiLux™.

Fluorescent fixture wattage to be replaced (96 watts for 3 tube T8 fixture)	-	Led folio TiLux™	=	Watts saved per fixture	x	Number of fixtures to replace	=	Total watts saved	/1000 =	Total Kilowatts saved
96 W	-	75 W	=	21 W	x	1570 fixtures	=	32,970 W	/1000 =	33.0 kW

## 2. Compute the energy (kW) saved by dimming capabilities and reduced HVAC load due to conductive heat generation

Estimated dimming energy savings (20%)	+	Estimated HVAC energy savings (16%)	=	Total watts saved	/1000 =	Total Kilowatts saved
20 %	+	16 %	=	42,390 W	/1000 =	42.4 kW

## 3. Compute the total energy (kilowatt hours,) saved annually by performing this upgrade

Total Kilowatts saved	x	Hours of Use per Day	x	Days of Use per Week	x	Weeks of Use Per Year	=	Total kWh Savings per Year
75.4 kW	x	14 hrs/day	x	7 days/wk	x	52 wks/yr	=	384,035 kWh per year

## 4. Compute the total energy cost savings per year

Total kWh Savings per Year	x	Your Energy Cost per kWh (typically \$0.1)	=	Total kWh Savings per Year
384,035 kWh/yr	x	0.1 kWh	=	\$38,403 per year

## 5. Compute the total maintenance and the hazard disposal annual savings

Estimated fluorescent life expectancy (14,000 hours)	Estimated ballast life expectancy	Fluorescent Tubes replacement	Ballast replacement per fixture	Annual disposal Cost	=	Maintenance savings Per Year
20,000 Hours	30,000 Hours	Every 3.9 Year	Every 5.9 Year	\$2,134 /Year =	=	\$26,174 per year

## 6. Investment and estimated rebates

Fluorescent cost/fixture Direct fixture (\$100 - \$175), Indirect fixture (\$125 - \$300)	LED folio cost/ TiLux™	Estimated Energy Rebates Government and City	=	Initial Investments
\$ 135 / fixture	\$238 / fixture	\$30,000	=	\$131,710

## Total Annual Savings:

\$64,578 per year

## Simple Payback =

$$\frac{\text{Initial investment of lighting upgrade ( = \$131,710)}}{\text{Total Energy Cost Savings per Year ( = \$64,578)}}$$

=

2.0 Years

## Return on Investment = (ROI)

$$\frac{100}{\text{Simple Payback ( = 2.0)}}$$

=

49 %

# Advantages

## Lifetime

In normal office conditions the Tilux™ will burn up to 15 years longer than contemporary fluorescent fixtures while using less energy and creating less heat.

## Maintenance

Tilux™ are, besides the occasional dusting, maintenance free: no bulbs or ballast to change, making convenience of ownership a top priority.

## Elegant and Glare-Free

While Tilux™ produces comparable light to fluorescent systems, fluorescents pack that large amount of light into a tiny, 1/2" surface area. The result is glare, which is not only painful to look at but can be hazardous. Fluorescent systems are then forced to shield their bulbs from direct viewing to avoid glare, which results in their low fixture efficiency. Tilux™, on the other hand, provides the same amount of light spread out over a continuous and uniform field of four square feet. The result is an elegant, perfectly uniform light source, which produces an aesthetically pleasing, soft light—perfect for boutique lighting applications.

## Disposal

Because of the presence of mercury in fluorescent bulbs, stricter policies have been enacted regarding their disposal. In office buildings, special contractors must be hired to dispose of the bulbs, which must be destroyed in specially outfitted incinerators. Tilux™ needs no such disposal arrangements.

## Health Benefits

LEDs have been shown to be up to 20 times as effective at stimulating the circadian system, which has many conducive benefits.

## Better Efficiency

Published fluorescent efficiencies do not take into account a variety of factors which seriously compromises fluorescent fixture performance. By the time one accounts for fixture efficiency, ballast factors, temperature factors and coefficient of utilization, the published fluorescent efficiencies are in line, and in many cases, below Tilux™ efficiencies.

## Price

Despite all of these advantages of Tilux™ over competing technologies, the fact that Tilux™ is comparably priced to these other technologies is our biggest advantage. We offer some of the lowest priced LED fixtures on the market and arguably the only one that can effectively be used for general lighting.



**An investment less than \$10k  
can change the property value.**



## Specifications

<b>Color Temperature Range:</b>	3200°K, 4500°K, 5500°K, 6500°K	<b>Listings:</b>	UL
<b>Source:</b>	High Efficiency White LED	<b>Input Power:</b>	110/277V; AC 50-60 Hz.
<b>Beam Angle:</b>	Wide Intensity Distribution	<b>Power Consumption:</b>	75 Watts
<b>Housing:</b>	Die Cast Aluminum	<b>CRI:</b>	85

## Ordering Guide

**Example** TiLux 22 - 01G - 3200 - UNV - D100

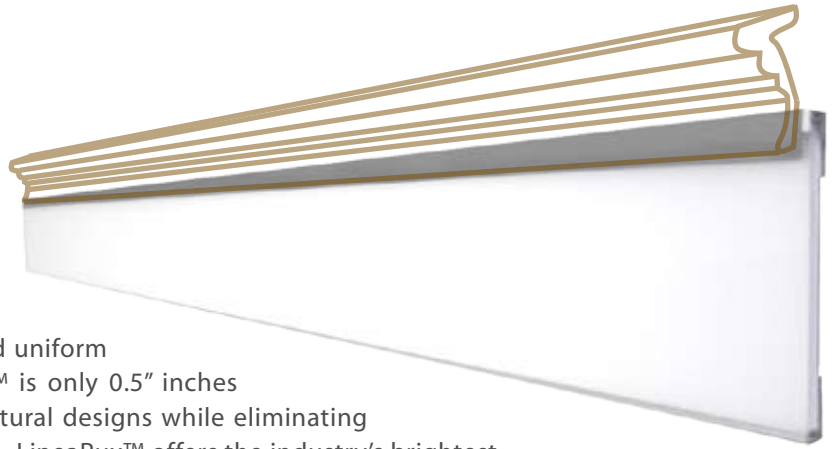
TiLux

<p><b>Series</b> TiLux</p>	<p><b>Surface Finish</b></p> <p>01 No Hatch</p> <p>02 Cross Hatch</p>	<p><b>Ceiling Type</b> G Grid</p>	<p><b>Voltage</b> UNV 120V/277V</p>
<p><b>Size</b> 22 2'x2'</p>		<p><b>Color Temperature</b></p> <p>3200 3200°K 4500 4500°K 5500 5500°K 6500 6500°K</p>	<p><b>Dimmer Option</b></p> <p>D100 Control knob on the unit D125 Remote with wire D250 Remote with RF</p>

# Other Products

## LineaRux™

**LineaRux™** is a unique and stylish indirect LED light that delivers more comfortable and uniform light than indirect cove fixtures. LineaRux™ is only 0.5" inches thick and blends seamlessly in your architectural designs while eliminating the glare and harsh shadow of direct lighting. LineaRux™ offers the industry's brightest indirect lighting ideal for homes, hotels and offices and is flexible enough for almost any custom design.



## PaneLux™, CircuLux™

**PaneLux™** is LED folio's answer to your custom lighting design needs. PaneLux™ is produced in a standard 1x1 LED lighting panel but can be easily customized in numerous patterns for the floor, wall or ceiling. Available for recessed or surface-mounted installation, PaneLux™ provides the same comfortable and uniform lighting as standard LED folio product lines while making it possible for clients to realize specific architectural plans without sacrificing quality. Easily modifiable in a variety of different designs and settings, PaneLux™ offers a design flexibility ideal for your most demanding projects.

### **LED folio Corporation**

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