

THE FIFTH LIGHT



PENTRON T5 FIXTURES
&
THEIR ENERGY SAVINGS
POSSIBILITIES



WESWORTH

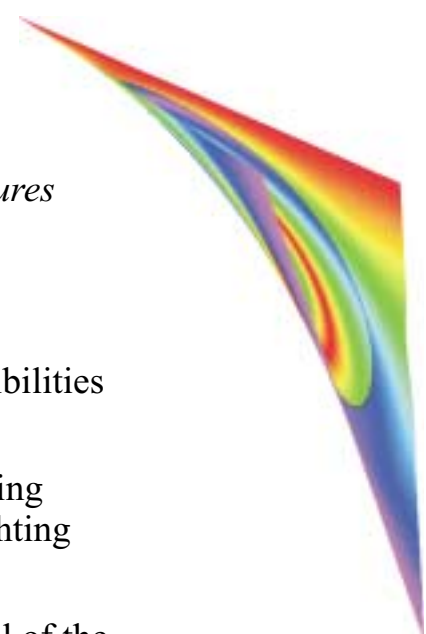


ELECTRIC

INTRODUCING THE...

PENTRONIC TECHNOLOGY

The technology and components behind the Fifth Light Series of Fixtures



EVOLUTION OF THE LIGHT



Open your eyes to the revolution that is opening energy savings possibilities across the country...

The Pentronic (aka T5, Pentron, or Highfive) linear fluorescent lighting system is the triumphant result of many years of work improving lighting efficiency.

Developed by Osram-Sylvania, these Pentronic components power all of the our most advanced "Fifth Light" series of fixtures.

HOW IS IT DIFFERENT?



While similar to today's T8 & T12 linear fluorescent systems...

Pentron lamps are **1/3 thinner** but **3 times** as bright as older T12 lamps.

Pentron lamps have a life expectancy of **20,000** hours & warranty of **24** months!

Pentron ballasts and lamps were specially created to achieve **maximum light per watt** used.

PERFORMANCE*



Lumens per watt

92

compared to: 88-T8s, 76-T12s & 45-Metal Halides

Lumen Depreciation

5%

compared to: 11% light loss for T8s, 34%-T12s & 55%-Metal Halides over the lifetime of the lamp

Color Accuracy

98

compared to: 91 relative calculation of Color Rendering Index, Color temperature and site results for T8s, 83-T12s, 62-Metal Halides & 100 for sunlight.

EVOLUTION OF THE PENTRON

1938 - First Fluorescent tube developed

1978 - T12 Lamp Components developed.

1982 - T10 lamp components developed.

1983 - T8 Octron(R) lamps components developed.

1997 - T5 Pentron HO lamp components developed. (The Fifth Light)

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*Comparisons are generalizations based on typical lamps in service. Contact Wesworth for exact comparisons based on your system.




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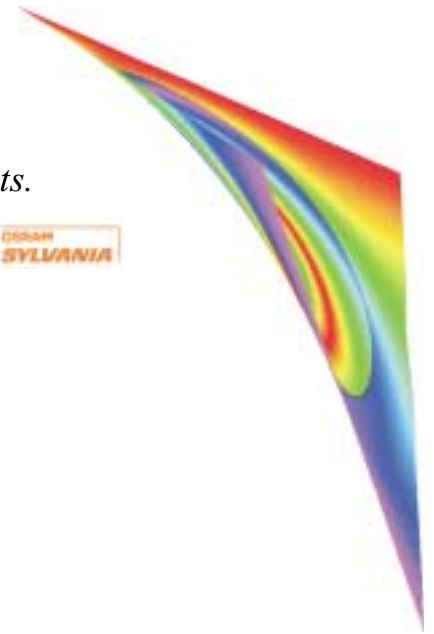
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INTRODUCING THE...

PENTRONIC FIXTURES

The Fifth Light series of fixtures utilizing the T5 Pentronic components.

featuring components by 



PENTRONPRO STRIP FIXTURES

*The affordable T5 fixture for
lowbay & task lighting.*



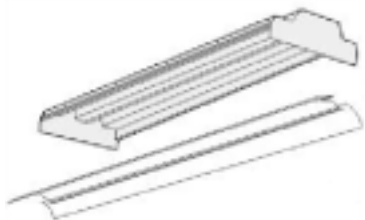
QUINTUS HIGH BAY FIXTURES

*The solution for cost effective
high bay retrofits!*



HIMAX BIAXLE FIXTURES

*Today's innovative and
versatile lighting fixture!*



RETROFIFTH T5 RETROFIT KITS

*The simple conversion kit for
fluorescent fixtures!*



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PENTRONPRO STRIP FIXTURES

FEATURE SHEET

*The affordable T5 fixture for
lowbay & task lighting.*



APPLICATIONS

- High Aisle Ways
- Machinery Task Lights
- Parking Garages
- Bench Work Areas
- Low Bay Warehouse Areas

**Replaces 8 foot 60, 75 and
High Output Systems**

**Replaces metal halide 250 and
400 watt lowbay systems**

KEY FEATURES

- High Quality Construction
- Custom design mirrored reflector
- Affordable for Retrofit applications
- Instant On, Instant Restrike
- High Color Quality (90 CRI)
- Multiple Mounting options
- 60/24 month ballast/lamp warranty
- UL Listed
- FPL Rebatable!







MODELS

- PP-180V** PentronPro w/ 1 80w T5 lamp in vapor proof housing
- PP-254** PentronPro w/ 2 T5 lamps (1 8' row of lamps)
- PP-454** PentronPro w/ 4 T5 lamps (2 rows of lamps)
- PP-654** PentronPro w/ 6 T5 lamps (3 rows of lamps)
- PP-654A** PentronPro w/ Angled 15degrees at midpoint

Other options available w/ 6' 80 watt components

ENERGY

SAVINGS POSSIBILITIES

Old System, Watts		➔	New System, Watts		Savings / Per year*	
 MH 250	285		 PP 254	117	59%	\$75
 8' 4L 75 w	276	 PP 254	117	58%	\$71	year
 MH175 P.Garge	205	 PP 180V	87	58%	\$53	year



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QUINTUS HIGH BAY FIXTURES

FEATURE SHEET

*The solution for cost effective
high bay retrofits!*



APPLICATIONS

- Warehouses
- Manufacturing facilities
- Showrooms
- Sports Complexes
- HiBay designer applications

**Replaces 250, 400 and
1000watt HID systems**

**Perfect for coordination with
daylight harvesting**

KEY FEATURES







- High Quality Construction
- Custom design mirrored reflector
- Affordable for Retrofit applications
- Instant On, Instant Restrike
- High Color Quality (90 CRI)
- Thin, Wide & Recessed versions
- 60/24 month ballast/lamp warranty
- UL Listed & FPL Rebatable!
- Dimmable & Staged switching

MODELS

- Q3L** Quintus3Long w/ three 6' 80w lamps
- Q4** Quintus4 w/ four 4' 54w lamps
- Q4W** Quintus4Wide w/ four 4' 54w lamps
30" wide
- Q5** Quintus5 w/ five 4' 54w lamps
- Q5L** Quintus5Long w/ five 6' 80w lamps
- Q6L** Quintus6Long w/ six 6' 80watt T5
lamps
- Q8** Quintus8 w/ eight 4' 54w T5 lamps

And many and many other configurations

ENERGY SAVINGS POSSIBILITIES

Old System, Watts			New System, Watts		Savings / Per year*	
	HPS 250w	290		Q3 Long	174	40% \$52 year
	MH 400w	450		Q4	234	48% \$97 year
	MH 1000w	1100		Q6 Long	522	53% \$259 year

*Based on 108 hrs/wk, \$0.08 kWh cost, standard installation



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HIMAX BIAXLE FIXTURES

FEATURE SHEET

Today's innovative and versatile lighting fixture!



APPLICATIONS

- Warehouses
- Manufacturing facilities
- Showrooms
- Sports Complexes
- HiBay designer applications

Replaces 250, 400 and 1000watt HID systems

Perfect for coordination with daylight harvesting








KEY FEATURES

- High Quality Construction by AEI
- Custom design mirrored reflector
- Instant On, Instant Restrike
- High Color Quality (90 CRI)
- Recessed, Surface or Pendant Mount
- 60 month ballast warranty
- UL Listed
- HiMAF Only:*
- 0, 15, 25 degree adjustable angle*

MODELS

- Himax22** 2x2 fixture w/ upto 5 T5 biax lamps
- Himax23** 2x3 fixture w/ 5 or 6 T5 biax lamps
- HiMAF2** Multi-Angled fixture ("Batwing") with twin sets of upto 5 T5 biax lamps
- HiMAF6** Multi-Angled fixture ("Batwing") with twin sets of upto 4 T5 linear lamps

ENERGY SAVINGS POSSIBILITIES

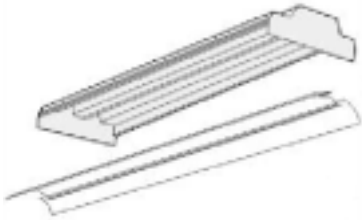
Old System, Watts			New System, Watts		Savings / Per year*	
 MH 250w	285		 H22 340	105	63%	\$81 year
 MH 400w	450		 H23 555	216	48%	\$97 year
 MH 450w	450		 HM2 840**	256**	57%	\$115 year

*Based on 108 hrs/wk, \$0.08 kWh cost, standard installation
 **Based on utilizing daylight harvesting system allowing the staging of lamps in to accommodate natural light sources.



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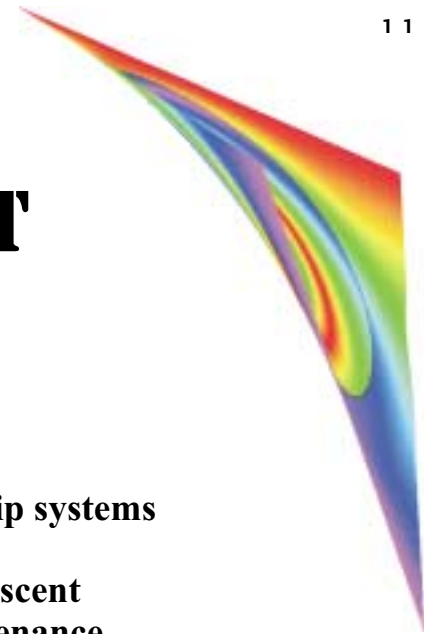


RETROFIFTH

T5 RETROFIT KITS

FEATURE SHEET

The simple conversion kit for fluorescent fixtures!



APPLICATIONS

- Warehouses
- Manufacturing areas
- Alcove areas
- Loading Docks
- Inspection Stations

Ideal for 8 foot strip systems

Best for any fluorescent fixture with maintenance problems

KEY FEATURES

- Kit includes reflector, lampholders and all mounting hardware for easy retrofit
- 95% polished reflector
- CAD designed kit for maximum light output
- Custom kits available for every fixture and lighting need
- Affordably priced for full T5 retrofit
- UL Listed

MODELS

- R401** 4' 2 light strip (to 4' 1L T5 strip)
- R402** 4' 4 light strip (to 4' 2L T5 strip)
- R802** 8' 2 light strip (to set of 2 4' 1L strips)
- R804** 8' 4 light strip OR 2 light HO strip
- R204** 2x4 3 or 4 light troffer (to 1L T5 fixture)
- R860** 8' 2 light strip (to 6' 1L T5 strip)

Other options:

C- cage covering, V-vapor proof, W- wrap fixture style, E-Economy 87% reflector

ENERGY

SAVINGS POSSIBILITIES

<u>Old System, Watts</u>	>	<u>New System, Watts</u>	<u>Savings / Per year*</u>
8' 4L 75 w 276		R 802 117	58% \$71 year
2x4 3lite 143		R 204 54	62% \$40 year
8'2L 75w 168		R 860 83	57% \$38 year

*Based on 108 hrs/wk, \$0.08 kWh cost, standard installation



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PENTRON SERIES FIFTH LIGHT FIXTURES

F.A.Q.S

What are T5 lamps? How do they differ from the new T8s?

A T5 lamp or Pentron is a thinner type of fluorescent lamp. Where T12s are about 1.25" diameter and T8s are about 0.75", T5's are about 0.5" in diameter. However the T5 can produce nearly three times as much light as a T12 and nearly twice the light of a T8. These 4' lamps are very popular in Europe, however their High Output cousins are just becoming popular here.

Are these linear or bi-axle lamps?

Pentron lamps or T5s are linear or 4' long straight. T5 bi-ax or DULUX "L" are another species of lamp, that share some of the advantages of the T5 Pentron, but not all of them. Wesworth offers a T5 Bi-ax fixture, which is useful in many situations. The AEI Versalite is one of these fixtures.

We just switched from fluorescent to Metal halides (HID) because we were told that they are more efficient. Is this not true anymore?

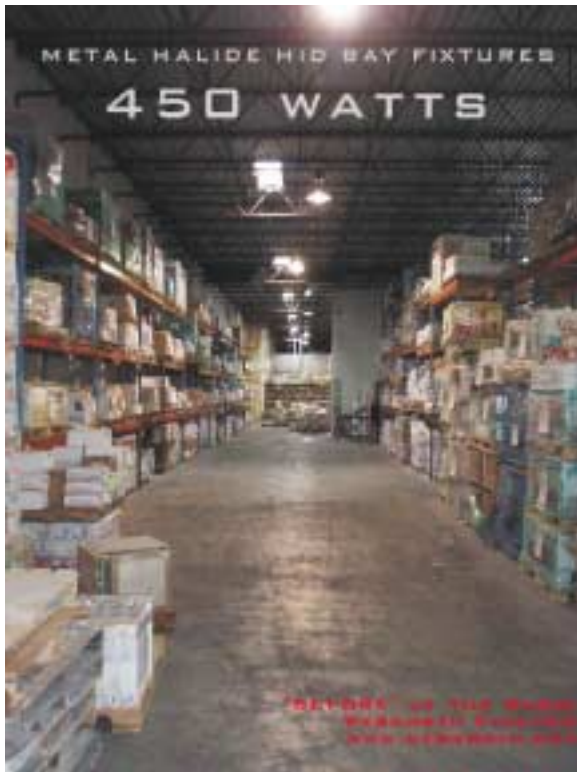
Yes, and no. Metal Halide was created as a better lamp for warehouse applications. While the industry had adopted the super-efficient High Pressure Sodium, its orange-ish tint made it lose favor with detail work. Fluorescents tried to answer back with High Output versions, yet their short lifetime and high wattage discouraged their use. Therefore the Metal Halide was created as efficient light source with reasonable color and decent lifetime. That being said, the Metal Halide's long startup time, spotlight effect, strobing effect and light shear makes it a less-than-perfect lamp. Early attempts with compact fluorescents and reflectors proved too expensive to unseat the Metal Halide. Yet today, with superior colour, instant on, better longevity, more efficient lumens per watt, and affordable technology the Pentron class of fluorescents is poised to replace the Metal halide.





PENTRON SERIES FIFTH LIGHT FIXTURES

PHOTO GALLERY



BEFORE: Notice that these Metal Halide fixtures 1) show a spotting effect on the floor 2) do not illuminate the sides of the shelves and 3) produce a dirty color.



AFTER: Notice that these new Quintus fixtures 1) produce a constant light level on the floor 2) illuminate the sides of the shelves 3) render a clear crisp light overall 4) **SAVES 60% WATTS!** and 5) **PAID FOR ITSELF WITHIN 2 YEARS!**

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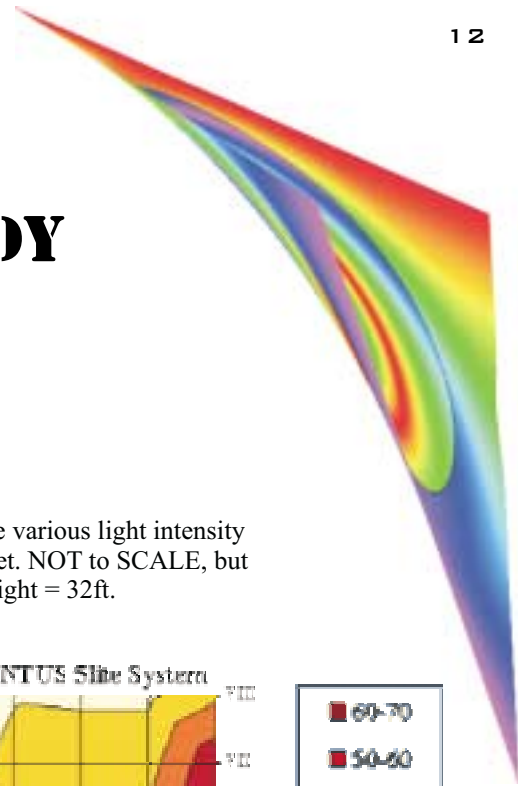
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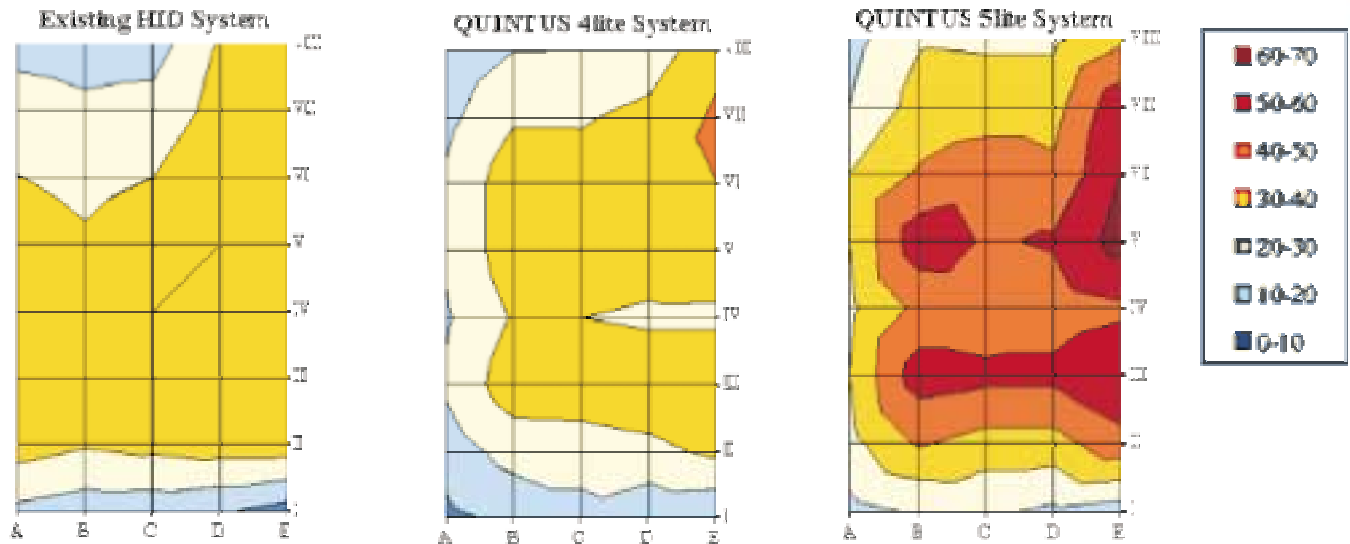


PENTRON SERIES FIFTH LIGHT FIXTURES

APPLICATION STUDY



This the light (footcandle) plotting for an area of a warehouse. It shows the various light intensity for the three systems. Each block A-E is ~10feet, each row I-VIII is ~12feet. NOT to SCALE, but each plotting measured relative to each other. Ceiling = 35ft. Mounting height = 32ft. Measurement plane = 3ft.



While the fixtures have been in place for a few years, the facility was relamped within 2 months of this test. Notice that the light measurements are 30-40fc. **Relative Light Volume = 1.00 (Watts = 460ea)**

After installing new Quintus4 (1:1) fixtures, the facility had nearly the same light with 50% the watts. **Relative Light Volume = 0.92 (Watts = 234ea)**

After installing new Quintus5 (1:1) fixtures the facility got a brighter light level. Now nearly all areas meet the customer's goal of 35fc. Plus they saved over 35%. Some areas actually doubled light. **Relative Light Volume = 1.30 (Watts = 293ea)**

