LED COMMERCIAL LIGHTING RECESSED & DOWN LIGHTING

CASE STUDY

WONIK(XIAN)SEMI CONDUCOTR TECHNOLOGY CO.,LTD

Xian **CHINA**

GigaTera®
beyond light

Installation Area : **Office Space Lighting**

WONIK SEMI CONDUCOTR TECHNOLOGY CO.,LTD Xian

After replacement: **639** lx (average)

Wonik (Xian) Semiconductor Technology Co., Ltd.

Wonik (Xian) Semiconductor Technology Co., Ltd. is a general enterprise engaged in semiconductors, architecture, finance, facilities, and other business areas.
The company operates overseas branches in the US, Germany, China, and Taiwan.
Wonik (Xian) is also one of the main partners of Samsung, providing the latter with cleaning services for high-purity, special-purpose gases, outer quartz pipes, inner quartz pipes, components, etc.
The total investments of the company is USD 14,000,000, its fixed assets are RMB 79,240,000, and the total area of the company perimeter is 16,158.91㎡.

Summary

Wonik (Xian) Semiconductor chose the LED lights made by GigaTera [G+] for improvement of lighting across all sections of the company.
Based on detailed on-site investigations (in offices, meeting rooms, and workrooms) and researches, GigaTera[G+] proposed to Wonik (Xian) Semiconductor a lighting solution capable of saving energy and improving brightness at the same time. Lighting products made by GigaTera[G+] boast features and aesthetic exteriors far superior to those of its competitors that provide users with a pleasant and environment-friendly lighting environment.

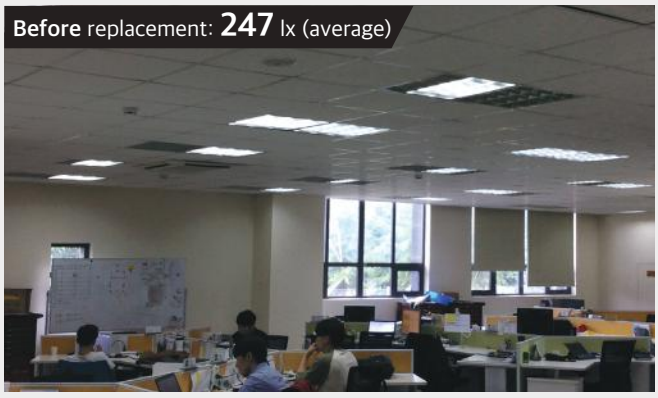
Project

Wonik (Xian) Semiconductor had been using fluorescent lights and downlights. These types of light required a high amount of electricity, did not offer sufficient light, created shades across all offices, and broke down so frequently that the company had to pay a large sum of money for maintenance expenses.
GigaTera[G+] products were chosen as an alternative to solve these issues.

Benefits & Results

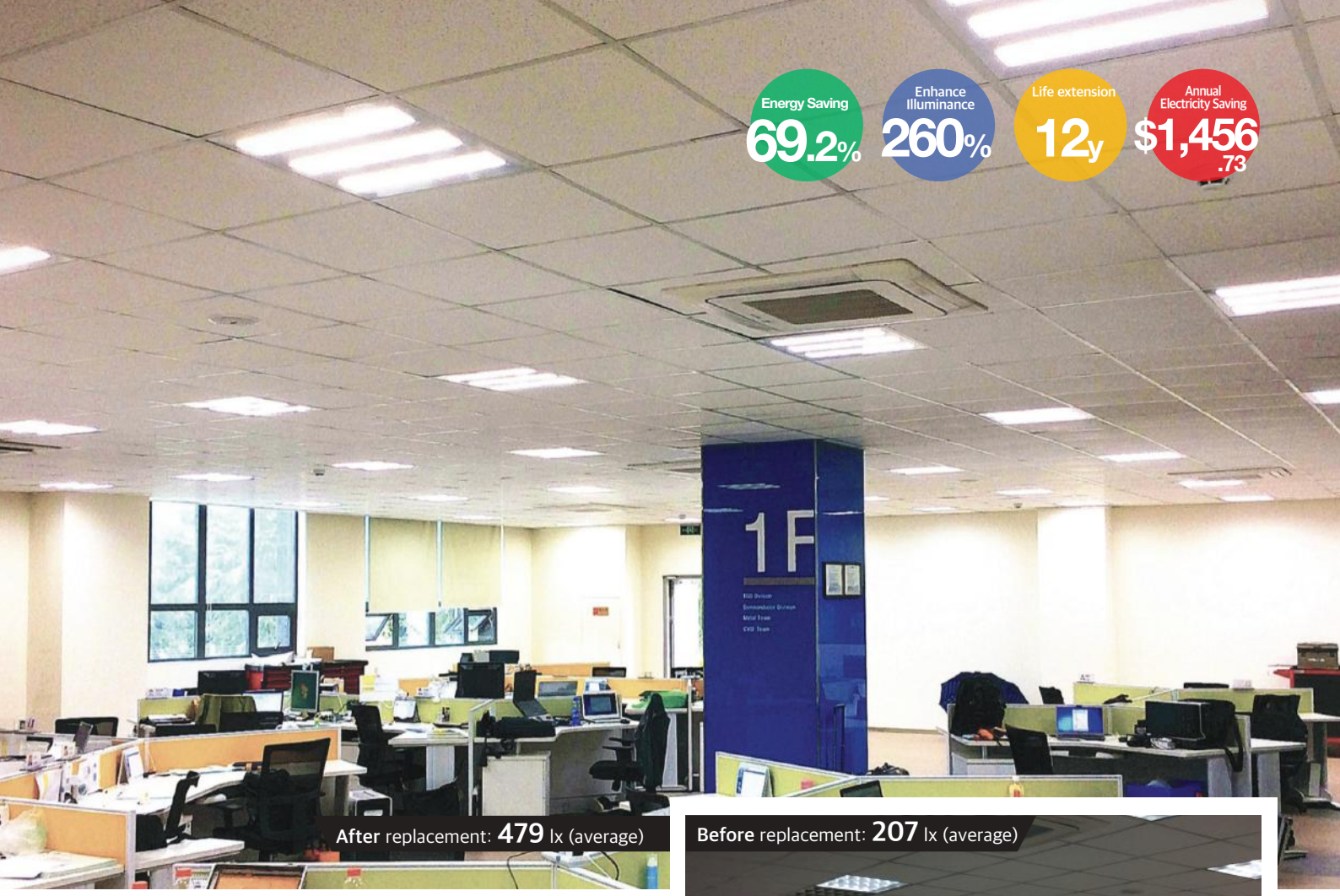
- Work environment improved with the introduction of the environment-friendly LED lights
- Brightness improved by 200% compared with previous lights
- Energy consumption reduced by 60% on average; maintenance fee substantially reduced
- 5-year warranty, 12-year product life
- Work efficiency improved with more uniform illumination
- Satisfies the office brightness requirement under GB50034 Architecture Lighting Design Regulation
- Improved color rendering index offers colors much closer to the natural light

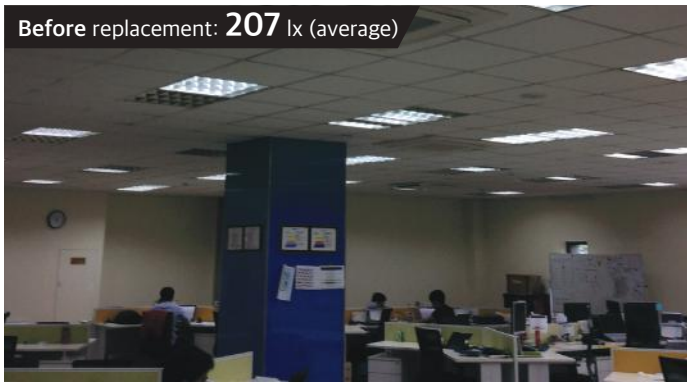
Before replacement: **247** lx (average)



Install Data (2F office)

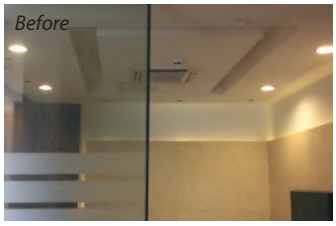
	Before	After
Model Name	2x2 Lamp 60W	TERA 32W
Power Consume	2,280W	1,210W
Q'ty	38 ea	38 ea
Average	247 lx	639 lx
Energy Saving	47 %	

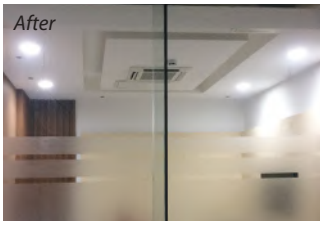




Site Information

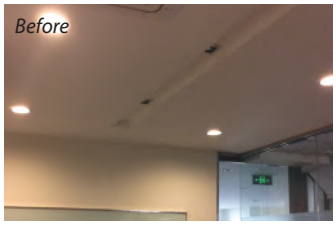
Application	Recessed & Down Lighting
Location	WONIK SEMI CONDUCOTR TECHNOLOGY CO.,LTD (Xian)
Light source	Tera 32W & GAGA 10W
Lighting support	GigaTera [G+]

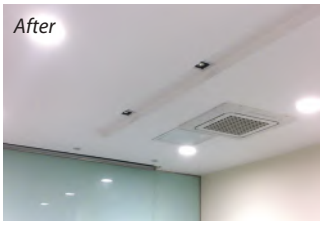




1F conference room ▲

	Before	After
Model Name	CFL Lamp 30W	GAGA 10W
Total Power	104W	40W
Average	98 lx	321 lx
Energy Saving	61 %	





2F conference room ▲

	Before	After
Model Name	CFL Lamp 30W	GAGA 10W
Total Power	156W	60W
Average	60 lx	360 lx
Energy Saving	61 %	

	Before	After
Model Name	2x2 Lamp 60W	TERA 32W
Power Consume	4,260W	1,312W
Q'ty	71 ea	41 ea
Average	207 lx	479 lx
Energy Saving	69.2 %	

The comparative cost analysis

	Before		After	
Model Name	Old Fluorescent Lights	Old Downlights	TERA	GAGA
Q'ty	109 ea	71 ea	79 ea	71 ea
Energy Consumption	6,540W	1,846W	2,528W	710W
Annual Electricity Costs	$ 3,770.35	$ 1,456.73	$ 1,456.73	$ 402.74
Annual maintenance Costs	$ 342.76	$ 145.67	$ 0	$ 0
Annual Electricity Costs	$ 4,113.11	$ 1,208.23	$ 1,456.73	$ 402.74
Total of Annual Costs	$ 5,321.34		$ 1,859.47	

Electricity charges and maintenance expenses reduced by KRW 4,040,000 in total!
Illuminance improved by 2.3-folds, energy consumption reduced by 69.2%,
and product life increased by 6.25-folds.

GigaTera® Global Directory

Head Office / Republic of Korea
Address : 183-19 Youngcheon-Ro, Hwaseong-Si, Gyeonggi-Do, Korea (18462)
Tel : +82-31-370-8866
Fax : +82-31-370-0443
E-mail : ledsales@gigateraled.com
http://www.gigateraled.com
http://www.kmw.co.kr

GigaTera Japan Inc.
Address : 4F, K&G Bldg., 1-3, Yamabukicho, Naka-ku, Yokohama-shi, Kanagawa, 231-0038, Japan
Tel : +81-45-251-8951
Fax : +81-45-251-8952
E-mail : info@gigatera.co.jp
http://www.gigateraled.com
http://www.kmw.co.kr/jp

GigaTera India
Address : P128, Sector5, IMT, Manesar, Manesar-122052, Haryana, India
Tel : +91 124 437 2035
E-mail : sales@gigateraled.com
http://www.gigateraled.com

GigaTera EU GmbH
Address : Bonner Str. 363 40589, Dusseldorf, Germany
Tel : + 49-(0)211-1592-4481
Fax : + 49-(0)211-1592-4482
E-mail : gteu@gigateraled.com
http://www.gigateraled.com
http://www.kmw.co.kr/eng

GigaTera [G+]
Address : Xi'An Huatian Telecom Inc. LED Dept. No.38 South Tuanjie Road, Xi'An Hi-Tech Zone, Shaanxi, P.R China
Tel : +86-29-8799-5888
Fax : +86-29-8799-5999
E-mail : gtcn@gigateraled.com
http://www.gigateraled.com
http://www.kmw.co.kr/cn

GigaTera Vietnam
Address : Lot C, Dong Van Industrial Zone, Yen Bac, Duy Tien Ha Nam, Viet Nam
Tel : +84-351-358-5590
Fax : +84-351-358-5597
E-mail : ledsales@gigateraled.com
http://www.kmw.co.kr/vn
http://www.gigateraled.com

GigaTera Turkey
Address : Mahmut Yesari Cad. No:18 Kosuyolu, Istanbul, Turkey, 34718
Tel : +90-216-326-5475
Fax : +90-216-326-5476
E-mail : sales@gigateraled.com.tr
http://www.gigateraled.com.tr
http://www.kmw.co.kr/eng

GigaTera Middle East
Address : Al Saman Tower, Block B 12th Floor, Hamdan Street, Abu Dhabi, UAE P.O Box 5100287
Tel : +971-2-6210002
Fax : +971-2-6210003
E-mail : me@gigateraled.com
http://www.gigateraled.com
http://www.kmw.co.kr/eng

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