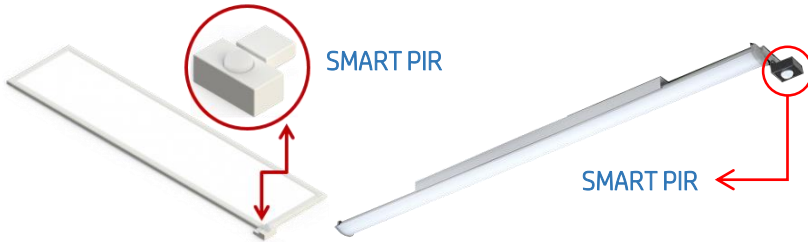


# GMG - SMART PIR LED LIGHT

## SMART LED LIGHTING SYSTEM



- IR Network System LED *KOREA 1<sup>st</sup>!*
- > Wireless Network to grouped LED lighting
- Motion Detecting Range Adjustable
- > Head Tilt PIR Sensor equipped
- Most Simple Digital Dimming System
- > Operating with PIR/Digital LED Sensor
- > Easy to set up by Remote Controller
- > Energy Saving up to 80%



1. SMART PIR Sensor Detect Movement
2. First LED of the Group light on and send signal to all LED of the Group

## SYSTEM REQUIREMENT

**GMG Auto Dimming System**

LED + PIR    Controller    SMPS

**Only 3 Items!**

**Competitor : Microwave/Zigbee System**

Microwave Sensor    Adapter    Wireless Zigbee Controller    LED

Dimming Controller    Remote Control Gateway    SMPS

**Too complicated to set up...**

## WHERE TO USE ?



Parking Lot



Hallway (Hotel, School, Office, etc.,)

# GMG LIGHTING CASE STUDY

## CASE STUDY



### garden5 Multiplex Mall, Seoul, Korea

Garden5 is an one-stop cultural complex where has about 6,000 compartment stores, multiplex theatre, book store, exhibition hall, spa, and other supplemental facilities such as production, sales for various industrial materials, distribution, and support facilities.

Client wanted to change existing fluorescent system to Smart LED System underground parking lot for more economic and efficient operation, and we have found quite impressed result after install SMART LED System.

## INSATLLATION

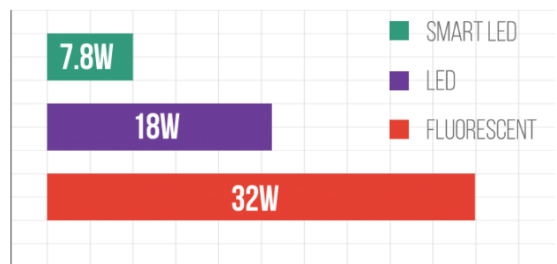


- Install Place : Underground Parking Lot    - System Setup : SMART PIR Communication  
Digital Dimming : Default Bright(30%)

## SYSTEM REPORT

구분	B4F 검침		B4F D존 LED센서등				다임		다임 절전율 계산	
	D존 FPM값		시 용량(kWh)		다임		100% 절전율 기준		100% 절전율 기준	
	A(㎾)	B(부)	A(㎾)	B(부)	합계	누계(RVH)	절전율(%)	100% 절전율 기준	100% 절전율 기준	100% 절전율 기준
2013-09-30	128.0	143.0								
2013-10-01	244.2	158.9	16.2	15.9	32.1	32.1	57.4%	2013-10-01 화	14.27A x 220V x 24H = 75.35(kWh)	다임 절전율 = (1 - 다임시 검침 사용량 / 100%절기 사용량) x 100(%)
2013-10-02	260.5	174.7	16.3	15.8	32.1	64.2	57.4%	2013-10-02 수		36.9%
2013-10-03	276.0	190.0	15.5	15.3	30.8	95.0	56.1%	2013-10-03 목		57.4%
2013-10-04	292.8	205.1	16.8	16.1	32.9	127.9	56.3%	2013-10-04 금		57.4%
2013-10-05	309.5	222.2	16.7	16.1	32.8	160.7	56.5%	2013-10-05 토		56.3%
2013-10-06	325.8	230.0	16.3	7.8	24.1	184.8	66.0%	2013-10-06 일		56.5%
2013-10-07	342.0	253.8	16.2	23.8	40.0	224.8	46.9%	2013-10-07 월		68.0%
2013-10-08	358.5	269.8	16.5	16.0	32.5	257.3	56.9%	2013-10-08 화		46.9%
2013-10-09	373.9	284.7	15.4	14.9	30.3	287.6	58.8%	2013-10-09 수	야간납	56.9%
2013-10-10	390.6	301.0	16.7	16.3	33.0	320.6	56.2%	2013-10-10 목		58.8%
2013-10-11	407.1	317.0	16.5	16.0	32.5	353.1	56.8%	2013-10-11 금		56.2%
2013-10-12	423.6	332.0	16.5	16.0	32.5	385.6	56.8%	2013-10-12 토		56.8%
2013-10-13	441.6	350.3	18.0	17.3	35.3	420.9	53.2%	2013-10-13 일		56.8%
2013-10-14	457.1	365.5	15.5	15.2	30.7	451.6	58.3%	2013-10-14 월		53.2%
2013-10-15	473.2	381.3	16.1	15.8	31.9	483.5	37.7%	2013-10-15 화		58.3%
2013-10-16	489.7	397.4	16.5	16.1	32.6	516.1	56.7%	2013-10-16 수	스마트유무	37.7%
2013-10-17	506.8	413.1	17.1	16.7	33.8	549.9	53.1%	2013-10-17 목		56.7%
2013-10-18	522.9	429.9	16.1	15.8	31.9	581.8	57.7%	2013-10-18 금		53.1%
2013-10-19	539.4	446.0	16.5	16.1	32.6	614.4	56.7%	2013-10-19 토		57.7%
2013-10-20	555.5	461.6	16.1	15.6	31.7	646.1	57.9%	2013-10-20 일		56.7%
2013-10-21	571.0	477.0	15.5	15.4	30.9	677.0	58.0%	2013-10-21 월		57.9%
2013-10-22	588.0	493.5	17.0	16.5	33.5	710.5	55.5%	2013-10-22 화		58.0%
2013-10-23	604.4	509.6	16.4	16.1	32.5	743.0	56.9%	2013-10-23 수	이마트유무	55.5%
2013-10-24	621.8	525.6	17.4	17.0	34.4	777.4	54.3%	2013-10-24 목		56.9%
2013-10-25	637.0	541.5	15.7	14.8	30.1	807.5	60.1%	2013-10-25 금		54.3%
2013-10-26	654.5	558.5	17.5	17.0	34.5	842.0	54.2%	2013-10-26 토		60.1%
2013-10-27	672.2	576.7	18.7	18.2	36.9	878.9	51.0%	2013-10-27 일		54.2%
2013-10-28	689.6	593.5	16.4	13.8	30.2	909.1	56.9%	2013-10-28 월		51.0%
2013-10-29	706.4	607.0	16.8	16.5	33.3	942.4	58.0%	2013-10-29 화		56.9%
2013-10-30	722.9	623.1	16.5	16.1	32.6	975.0	56.7%	2013-10-30 수		58.0%
2013-10-31	738.7	638.8	15.8	15.7	31.5	1,006.5	58.2%	2013-10-31 목		56.7%

### <Efficiency Rate of Light>



1. Fluorescent Changed to LED lighting  
⇒ 32W → 18W (44% Save)
2. Digital Dimming Save Rate  
⇒ 18W → 7.8W (56.9% Save)
3. Max. Saving Rate  
⇒ 32W → 7.8W (75.6% SAVE)

According to checking for 1month, Electric bill was reduced min. 40% to max. 70%  
Avg. Dimming usage rate is approx. 50%, and it affected a lot to reduce electric cost.