



LED

# MAGNIFIER

Clearing and brightening your eyes with the Enfren magnifier.

EF-200 ▶



## [Strong Points of EF-200 Magnifier]

- ◆ **Combined Magnifier and LED Chips**
  - An Extra Large Non-Spherical Multi Angular Lens
  - Eyesight Protection & Worsened Eyesight Prevention
- ◆ **Environment-friendly / Increased Product Life Span / Minimized Electricity Consumption**
  - Equipped with **High Brightness LED of Korea**
- ◆ **Convenience Feature for Users**
  - **2 Pieces of Flexible Spring Tube**
  - A Head Filter for Dazzling Prevention
  - **3 Steps Dimming Function**/Touch Sensor

## LED Magnifier Desk Lamp



New Concept of a Desk Lamp equipped with **Aspheric Multi focus Magnifier Lens** and **Environmentally friendly, high efficiency LED Chips.**

- **Elderly Users** who feel uncomfortable due to **presbyopia** when reading a small sized book such as the Bible, a Paper etc.
- **Professionals** who work for Patents, Designs and Drawings.
- It is very effective to people who work for Delicate Hand-Crafted such as Repair, Quilting and Handicraft etc. in a dark place daily.



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# Good Points of the Lens



## Strong Points of EF-200 Non Spherical Multi Angular Lens

- Providing Clear Magnified View without Distortion from Any Angle
- **Long Time Reading is possible**
- Due to Extra-Large Sized Lens, it is convenience that you can read both sides of a book at a glance.
  - : Lens Size : 112X155mm, **Viewable area: about 30X40cm,**  
Magnification ratio : X2
- No Risk of Damage because of light PC Material
- Improving Transmissivity of Lens caused by Various Coating

### <Spherical aberration>

The blurring of an image that occurs when light from the margin of a lens or mirror with a spherical surface comes to a shorter focus than light from the central portion. The changing focal length is caused by deviations in the lens or mirror surface from a true sphere. It may cause dizziness and headaches. (Not available for a long time. )

### <About Non-Spherical Multi Angular Lens>

- No Spherical Aberration
- Providing Clear Magnified View without Distortion from Any Angle for a Long Time.



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# Eye Protection & Worsened Eyesight Prevention

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## Eyesight Protection/ Prevention of visual loss



- \* Clear non-spherical Lens and No blink LED Chips are very effective for **Prevention of Weakening Vision** caused by presbyopia.
- \* It is essential for students who have to study and read a book because of its **excellence of Eye Protection and Prevention of visual loss.**

- \* Using DC electric power, **protect your eye sight.**
  - No Lights Blinking

# Environment Friendly High Brightness LED

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- \* **A Pollution-free Environment-friendly LED**
  - Not included mercury which is used for fluorescent products
- \* **High Brightness SMD LED from Seoul Semiconductor**
  - More Bright, Wider Illuminating Angle
  - Excellent Protection against heat
- \* Equipped **Metal PCB with Dazzling Protection Cover.**  
(Using “**LUMIPLAS**” : Increasing Light Diffusion and Excellent Anti-dazzling effect)



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# Power Consumption & Long Life Span



**\*6 times cheaper electric cost than the fluorescent bulb**

**\*6 times longer life span than fluorescent bulb(Semi-permanent)**

	Incandescent Bulb	Fluorescent	Fluorescent of the Bulb Type	LED
<b>Brightness</b>	General Bright	Normal Bright	Very Bright	Very Bright
<b>Consumption (1,000LM/ 1Hour)</b> <small>*Based on Korean Rate</small>	100W <b>(4 Cent)</b>	40W <b>(1 Cent)</b>	20W <b>(0.5 Cent)</b>	Below 5W <b>(0.1 Cent)</b>
<b>Life Span (5Hours a Day)</b>	1,000 Hours	4,000~ 5,000 Hours	Below 5,000 Hours	From 30,000 To 50,000 Hours



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## 2 Pieces of Spring Tube

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New Design for the Users' Convenience.

Using **2 Pieces of Flexible Spring Tube**,  
Easy for adjusting the height and angle of  
Lamp head.



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# Dimming Function & Touch Sensor

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- \* Equipped with a **DIMMING function** which is available to control **3 steps brightness(Off-1-2-3)**.
- \* **PWM(Pulse Width Modulation) Touch System**  
: LED Lifetime Extension and Increased Reliability of the Touch Switch.

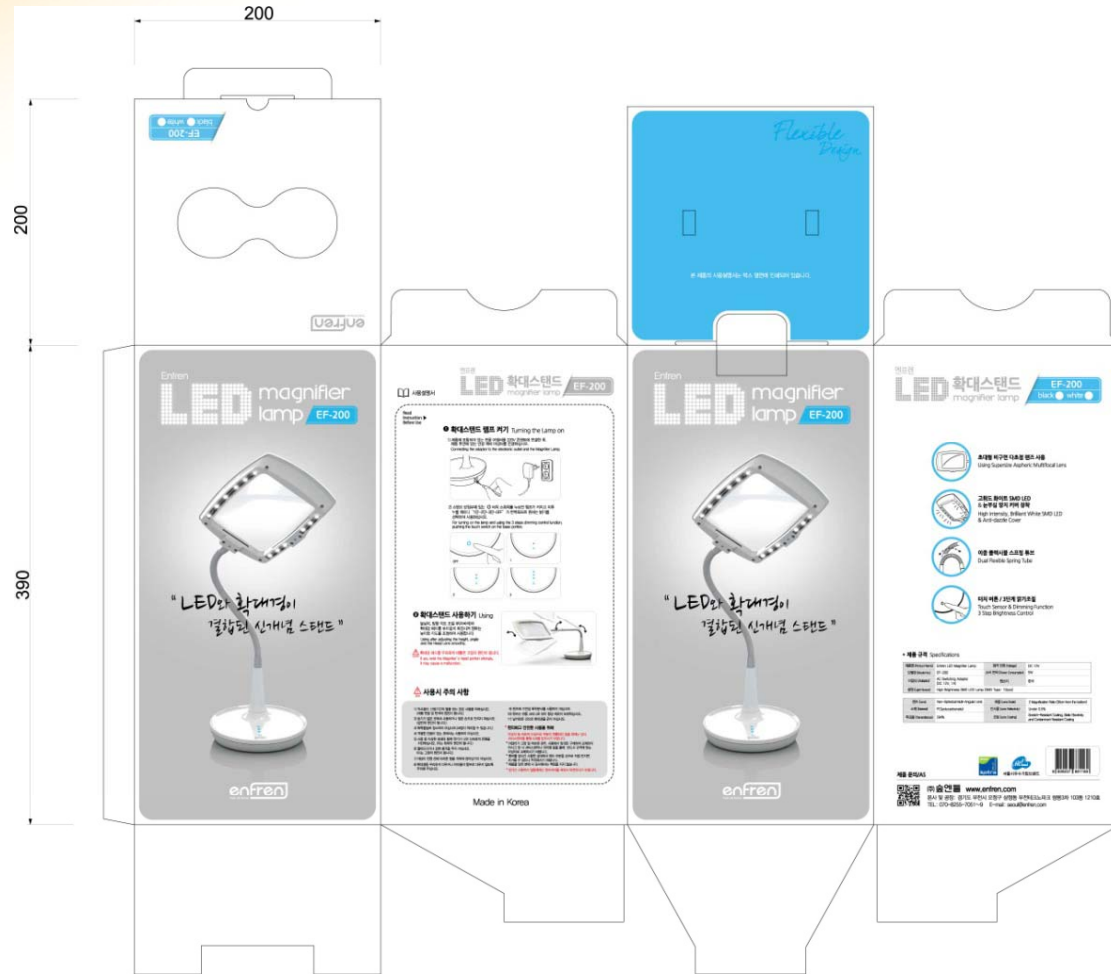


# Compact Packing

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\*Packing after separation of the LED Desk Lamp  
/ Compact Sized Gift Box

\* W \* H \* D : 200 \* 200 \* 390mm



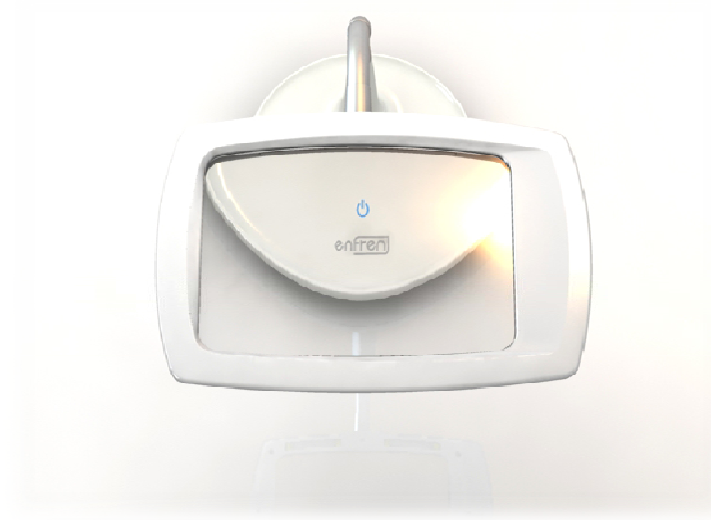
# View Angle & Product Color

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\*Length View type



\*Width View type



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# Product Color

## Wood



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Or  
Requested  
Color

**\* If you want special own color, MOQ 500pcs / color**



# Specification Of EF-200



EF-200	Specification
Light Source	High Brilliant White SMD LED of Seoul Semiconductor (Made in Korea LED chip 12pcs )
Brightness / Angle	5,300 mcd (650 Lux /35cm from the LED Bulb) / 180 ° STEP1=240 / STEP2=400 / STEP3=650 Lux
Control Brightness	Dimming Controller [0FF – Level 1– Level 2 – Level 3]
The source of electric power	AC-DC Switching Adaptor (Input:AC100~240V 50/60Hz, Output: DC 12V / 1A)
Electric Consumption	Max 5W (OFF; 0.4W / Level 1: 1.44W / Level 2: 2.76W / Level 3: 3.72W)
Product Size & Weight	Base Ø 170 * Height 350mm / Weight 1.7kg
Packing Quantity	20'FT DRY : 1,400 pcs
Package	LED Desk Lamp , User Manual , AC Adaptor (1.7m)



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# Specification Of Lens-1



## Non-Spherical Multi Angular Lens

- No Spherical Aberration
- Providing Clear Magnified View without Distortion from Any Angle for a while

EF-200 LENS	Specification
Size	155 x 112 (mm)
Material	PC(Polycarbonate)
Scale	2 Magnification Ratio(35cm from bottom)
Reflexibility	Under 0.5%
Transmittance	>94%
Surface of the Lens	Scratch-Resistant Coating, Static Electricity and Contaminant Resistant Coating
Manufacturer	KOREA Enfren Co., Ltd.

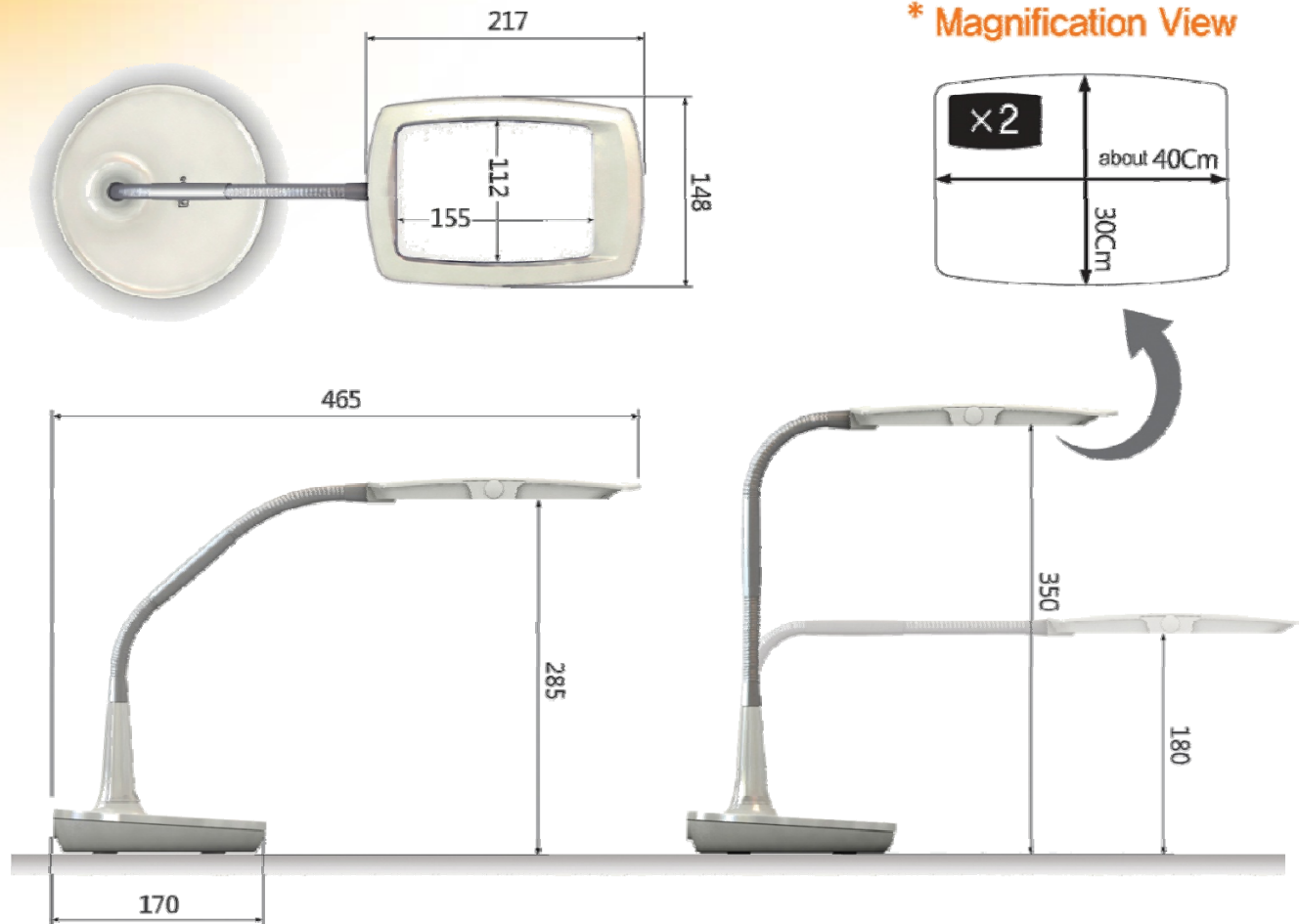


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# Specification Of Lens-2

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# CE Certification / RoHS



## Declaration of EU RoHS Compliance

### The EU Directive(s) covered by this Declaration

2002/95/EEC on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

**Product Name:** LED Magnifier  
**Model Number(s):** EF-200

### Supplementary Information

The basis on which Conformity is being Declared and the Products hereinto complies with the requirements of RoHS Directive 2002/95/EEC

### Remark:

- According to RoHS Directive, a maximum concentration value up to 0.1% by weight in homogeneous materials of electrical and electronic equipment for lead(Pb), mercury(Hg), hexavalent chromium(Cr VI), polybrominated diphenyl ether(PBDE) and polybrominated diphenyl ether(PBDE), and up to 0.01% by weight in specific materials for cadmium(Cd) shall be tolerated.
- The above products have been compliant since product inception. No changes have been made in process or materials. All products sold under the above P/N previously, currently and in future are will be fully compliant with EU Directive 2002/95/EEC



**ENFREN Co., Ltd.**  
103-1210, Busheon Techno Park Ssangyong(II),  
38-1 Sanjeong-Dong, Djeong-Gu, Busheon-City  
Gyeonggi-Do, Korea  
Tel: +82-70-8255-7051  
Fax: +82-32-424-1250  
<http://www.enfren.com>

*Seog Jin Kim*

Seog Jin Kim  
C.E.O

ZERTIFIKAT ◆ CERTIFICATE ◆ 合格証書 ◆ CERTIFICADO ◆ CERTIFICAT



## Attestation of Compliance

No. EBN 10 11 70812 002

**Holder of Certificate:** ENFREN Co., Ltd.  
#103-1210, Busheon Techno Park  
Ssangyong 3H, 38-1, Sanjeong-Dong,  
Djeong-Gu  
Busheon-City, Gyeonggi-Do 421-142  
REPUBLIC OF KOREA

**Name of Object:** LED lamps  
LED Desk Lamp

**Model(s):** EF-200, LTK-1600 and LTK-1600Wide

**Description of Object:** Rated input voltage: (100-240) V a.c.  
Rated frequency: 50/60 Hz

**Tested according to:** EN 55015A1:2007  
EN 61547A1:2005  
EN 61000-3-2:2009  
EN 61000-3-3A2:2006

This Attestation of Compliance is issued according to the Directive 2004/108/EC relating to electromagnetic compatibility on a voluntary basis. It confirms that the tested apparatus complies with all essential requirements of the EMC directive and applies only to the sample and its technical documentation submitted to TÜV SÜD Product Service GmbH for testing and certification. See also notes overleaf.

Test report no.: SE10NR-001



Date: 2010-11-05 (Kang Min Hee)

**CE** After preparation of the necessary technical documentation as well as the EC conformity declaration the required CE marking can be affixed on the product. Other relevant directives have to be observed.

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TÜV SÜD Product Service GmbH · Zertifikatsstelle · Rabenstraße 61 · 82030 München · Germany

TUV®



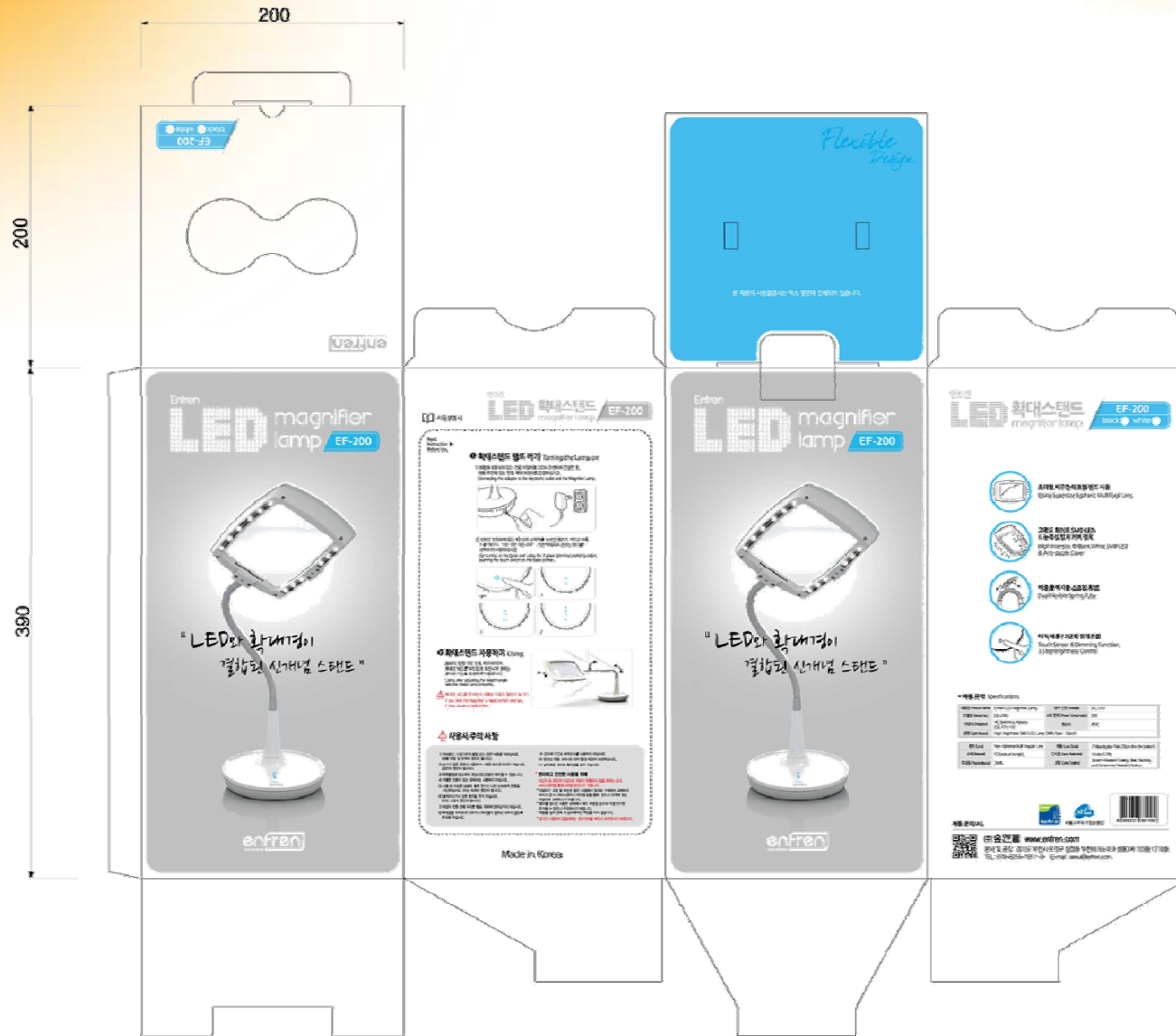
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# Gift Box

# LED MAGNIFIER



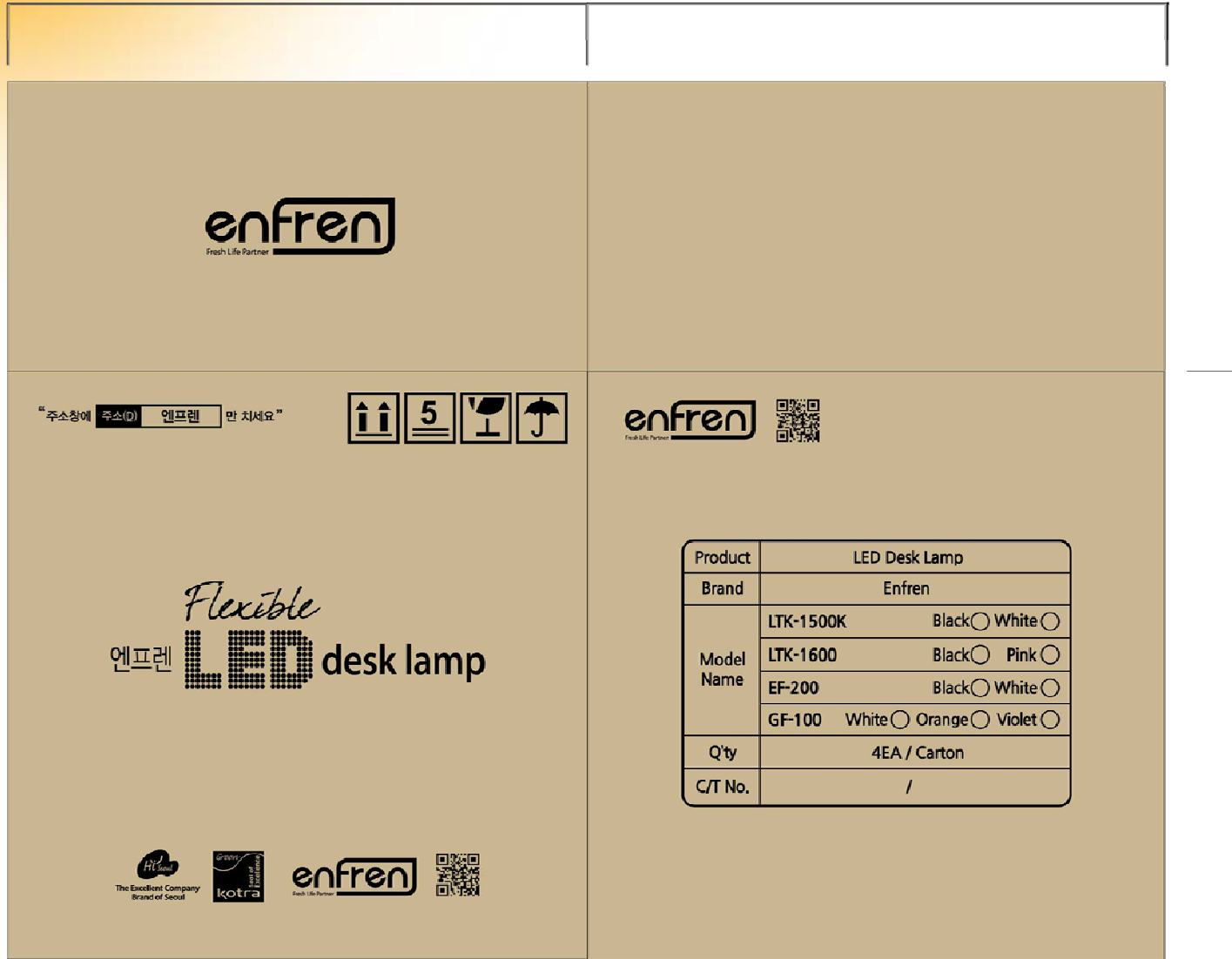
# Carton Box

## 4pcs for 1 carton

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416

414



422

Product	LED Desk Lamp	
Brand	Enfren	
Model Name	LTK-1500K	Black <input type="checkbox"/> White <input type="checkbox"/>
	LTK-1600	Black <input type="checkbox"/> Pink <input type="checkbox"/>
	EF-200	Black <input type="checkbox"/> White <input type="checkbox"/>
	GF-100	White <input type="checkbox"/> Orange <input type="checkbox"/> Violet <input type="checkbox"/>
Q'ty	4EA / Carton	
C/T No.	/	