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**ODHitec**  
Company Introduction



# ***Outdoor Display High Technology***

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## Overview & History

### Opening New Era of Digital Signage

### Transparent LCD and Outdoor LCD, Leader ODHitec

Since the establishment in 2008, ODHitec has been leading the Commercial, Industrial and Special Display market as the world first tier manufacturer and based on long experienced R&D power and own technology patented. We have been supplying the optimized and differentiated solution for each customer's demand with full model line-up and constantly introducing new concept application for Transparent LCD/OLED, Sunlight Readable(High Brightness), Panel PC and other special displays which are the most effective and innovative marketing media.

As the market frontier and the most trustworthy business partner, ODHitec will keep striving for leading-edge technology, value-added and differentiated products and trustful business management.



- 2008 Established ODHitec Co., Ltd.
- 2009 Development of Sun View LCD
- 2010 Patent application for Sun View technology  
OEM Supply of Sun View TFT LCD to GS-Caltex Self Lubricator  
Certified by ISO14000 & ISO9001
- 2011 Vendor registration to Public Procurement Service in the  
Ministry of Defense  
Supply Sunlight Readable LCD to the Korean Military Service  
Supply Sunlight Readable LCD for BIS(Bus Information System)  
Project in Japan
- 2012 World first mass production of 55", 70" Transparent LCD display  
Development of Mirror LCD and Patent application  
Development of DVS (Dual View System) and Patent application  
Patent application for Transparent LCD  
Sun View Touch Patent acquisition
- 2013 Factory expansion and relocation  
Selected as Venture and e-frontier company  
World first mass production of 84" Transparent LCD
- 2014 Release of Transparent LCD Refrigerator, 23", 42", 47"  
Development of Transparent LCD, Stand-alone solution  
Participate in Overseas Exhibition  
ISE (Netherland), CeBIT (Germany), InfoComm (Las Vegas, USA)  
GITEX (Dubai, UAE), HongKong Electronics Fair,  
China HI-TECH FAIR (Shenzhen, China)
- 2015 Release of Curved Transparent LCD  
Participate in Communic Asia (Singapore), InfoComm (Orlando)
- 2016 Development of 55" Transparent OLED  
Overseas sales expansion  
Supply of 42", 55", 70", 84" T-LCD to Avengers Exhibition project  
22" 1.5K, ODM project in Japan  
Participate in ISE, InfoComm, Communic Asia, GITEX
- 2017 Participate in ISE, ISC, InfoComm USA, GITEX  
World first mass production of 86", 98" Transparent LCD
- 2018 Participate in ISE, InfoComm USA  
Development of Transparent LCD Video wall  
Mass production of 8" 12.1", 15" 19" Panel PC for Electronic Vehicles fast charger
- 2019 Participate in ISE, Gitex  
Mass production of 24" Panel PC for Electronic Vehicles fast charger
- 2020 Participate in ISE  
Mass production of 11.6" and 43" Panel PC for Electronic Vehicles fast charger
- 2021 Factory Relocation to Naepo, Chungcheongnamdo

**ODHitec Co., Ltd –  
Panel PC**



# 01 Panel PC for EV Charger



As the EV market is getting bigger and bigger, the infra industry is growing as well. The emerging market of the infra industry is EV chargers, and it also grows every year. ODHitec is cooperating with many charger manufacturers in Korea and established an R&D lab to support them. Software and Hardware(pc, monitor, housing, etc) can be supported. By demands from the market, ODHitec is developing new customized products.



**42" Panel pc applied for Hyundai EV**

- Adapting High brightness (1000 ~ 1500nits) for perfectly outdoor use.
- Capacitive Touch screen applied.
- Win10, Linux supported.
- Waterproof (IP65), Customized PC and case, Reasonable price.
- Available size : 8", 10.4", 11.6", 12.1", 15", 15.6", 24", 43" and more.

# 02 Panel PC Roadmap

\*PC Specification Changeable.

ODHitec Panel PC Window 10									
Panel Size	8" Panel PC	10.4" Panel PC	11.6" Panel PC	12.1" Panel PC		15" Panel PC	15.6" Panel PC	24" Panel PC	43" Panel PC
Model No.	ODP080CT10-B3	ODP104X1L04-B3	ODP116CT10-B3	ODP121CT15-B3-S	ODP121CT15-B3-M	ODP150CT15-B3	ODP156CT15-B3	ODP240CT15-A9	ODP430CT10-B3
LCD	LCD Size	8", 16:9	10.4", 4:3	11.6" 16:9	12.1", 4:3	12.1", 4:3	15," 4:3	15.6", 16:9	24", 16:9
	Resolution	1024 X 600	1024 X 768	1920 X 1080	800 X 600	1024 X 768	1024 X 768	1920 X 1080	1920 X 1080
	Brightness (Typ.)	1000 nit/ Transflective	1500 nit/ Transflective	1000 nit/ Transflective	1500 nit/ Transflective	1500 nit/ Transflective	1500 nit/ Transflective	1000/1500 nit/ Transflective	1000/1500 nit/ Transflective
	Life time	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Touch	Type	P-CAP Touch	P-CAP Touch	P-CAP Touch	P-CAP Touch	P-CAP Touch	P-CAP Touch	P-CAP Touch	P-CAP Touch
	Touch Point	1 Point	1 Point	1 Point	1 Point	1 Point	1 Point	1 Point	1 Point
Mather Board	Tempered glass(3T)	UL60950	-	-	-	-	UL60950	UL60950	UL60950
	CPU	Intel Celeron Dual/Quad-Core	Intel Celeron Dual/Quad-Core	Intel Celeron Dual/Quad-Core	Intel Celeron Dual/Quad-Core	Intel Celeron Dual/Quad-Core	Intel Celeron Dual/Quad-Core	Intel Celeron Dual/Quad-Core	Intel Celeron Dual/Quad-Core
	RAM	RAM 2G / 4G	RAM 2G / 4G	RAM 2G / 4G	RAM 2G / 4G	RAM 2G / 4G	RAM 2G / 4G	RAM 2G / 4G	RAM 2G / 4G
	SSD	m-SATA 32G	m-SATA 32G	m-SATA 32G	m-SATA 32G	m-SATA 32G	m-SATA 32G	m-SATA 32G	m-SATA 128G
	Ethernet	2 x RJ45	2 x RJ45	2 x RJ45	2 x RJ45	2 x RJ45	2 x RJ45	2 x RJ45	2 x RJ45
	COM Port	RS232 x 3 / RS485 x 1	RS232 x 3 / RS485 x 1	RS232 x 3 / RS485 x 1	RS232 x 3 / RS485 x 1	RS232 x 3 / RS485 x 1	RS232 x 3 / RS485 x 1	RS232 x 3 / RS485 x 1	RS232 x 3 / RS485 x 1
	USB	USB 3.0 x 1, USB 2.0 x 3	USB 3.0 x 1, USB 2.0 x 3	USB 3.0 x 1, USB 2.0 x 3	USB 3.0 x 1, USB 2.0 x 3	USB 3.0 x 1, USB 2.0 x 3	USB 3.0 x 1, USB 2.0 x 3	USB 3.0 x 1, USB 2.0 x 3	USB 3.0 x 2, USB 2.0 x 2
	Audio	3꠵ Phone Jack	3꠵ Phone Jack	3꠵ Phone Jack	3꠵ Phone Jack	3꠵ Phone Jack	3꠵ Phone Jack	3꠵ Phone Jack	3꠵ Phone Jack
	OS	Win10 IOT (64BIT)	Win10 IOT (64BIT)	Win10 IOT (64BIT)	Win10 IOT (64BIT)	Win10 IOT (64BIT)	Win10 IOT (64BIT)	Win10 IOT (64BIT)	Win10 IOT (64BIT)
	IP protection	IP65 / Front	IP65 / Front	IP65 / Front	IP65 / Front	IP65 / Front	IP65 / Front	IP65 / Front	IP65 / Front
Mechanical & Environment	Power input	DC 12V	DC 12V	DC 12V	DC 12V	DC 12V	DC 12V	DC 12V, 8A	SMP5
	Power Consumption	20W	30W	30W	30W	30W	35W	40W	55W
	Operating	-20~70°C	-30°C~80°C	-30°C~80°C	-20°C~70°C	-20°C~70°C	-20°C~70°C	-30°C~80°C	-20°C~70°C
	Storage	-30°C~80°C	-30°C~80°C	-30°C~80°C	-30°C~80°C	-30°C~80°C	-30°C~80°C	-30°C~80°C	-30°C~80°C
Dimension (WxHxD)	234x157x65			301x239x55.5	301x239x55.5	390x315x74.6	426x277x66.2	600x370x84	998.x592x86.8

\*PC Specification Changeable.

ODHitec Panel PC Linux									
Panel Size	8" Panel PC	10.4" Panel PC	11.6" Panel PC	12.1" Panel PC		15" Panel PC	15.6" Panel PC	24" Panel PC	
Model No.	ODPL080CT10-L3	ODP104CT15-L3	ODP116CT10-L3	ODPL121CT15-L3-S	ODPL121CT15-L3-M	ODPL150CT15-L3	ODPL156CT15-L3	ODPL240CT15-L3	
LCD	LCD Size	8", 16:9	10.4", 4:3	11.6" 16:9	12.1", 4:3	12.1", 4:3	15," 4:3	15.6", 16:9	
	Resolution	1024 X 600	1024 X 768	1920 X 1080	800 X 600	1024 X 768	1024 X 768	1920 X 1080	
	Brightness (Typ.)	1000 nit/ Transflective	1500 nit/ Transflective	1000 nit/ Transflective	1500 nit/ Transflective	1500 nit/ Transflective	1500 nit/ Transflective	1000/1500 nit/ Transflective	
	Life time	30,000	30,000	30,000	30,000	30,000	30,000	30,000	
Touch	Type	P-CAP Touch	P-CAP Touch	P-CAP Touch	P-CAP Touch	P-CAP Touch	P-CAP Touch	P-CAP Touch	
	Touch Point	1 Point	1 Point	1 Point	1 Point	1 Point	1 Point	1 Point	
Mather Board	Tempered glass(3T)	UL60950	-	-	-	-	UL60950	UL60950	
	CPU	Intel Apollo Lake J3355 Dual2.0GHz/Quad-Core	Intel Apollo Lake J3355 Dual2.0GHz/Quad-Core	Intel Apollo Lake J3355 Dual2.0GHz/Quad-Core	Intel Apollo Lake J3355 Dual2.0GHz/Quad-Core	Intel Apollo Lake J3355 Dual2.0GHz/Quad-Core	Intel Apollo Lake J3355 Dual2.0GHz/Quad-Core	Intel Apollo Lake J3355 Dual2.0GHz/Quad-Core	
	RAM	RAM 2G / 4G	RAM 2G / 4G	RAM 2G / 4G	RAM 2G / 4G	RAM 2G / 4G	RAM 2G / 4G	RAM 2G / 4G	
	SSD	m-SATA 32G	m-SATA 32G	m-SATA 32G	m-SATA 32G	m-SATA 32G	m-SATA 32G	m-SATA 32G	
	Ethernet	2 x RJ45	m-SATA 32G	m-SATA 32G	2 x RJ45	2 x RJ45	2 x RJ45	2 x RJ45	
	COM Port	RS232 x 3 / RS485 x 1	RS232 x 3 / RS485 x 1	RS232 x 3 / RS485 x 1	RS232 x 3 / RS485 x 1	RS232 x 3 / RS485 x 1	RS232 x 3 / RS485 x 1	RS232 x 3 / RS485 x 1	
	USB	USB 3.0 x 1, USB 2.0 x 3	RS232 x 3 / RS485 x 1	RS232 x 3 / RS485 x 1	USB 3.0 x 1, USB 2.0 x 3	USB 3.0 x 1, USB 2.0 x 3	USB 3.0 x 1, USB 2.0 x 3	USB 3.0 x 1, USB 2.0 x 3	
	Audio	3꠵ Phone Jack	3꠵ Phone Jack	3꠵ Phone Jack	3꠵ Phone Jack	3꠵ Phone Jack	3꠵ Phone Jack	3꠵ Phone Jack	
	OS	Ubuntu 16.04.6 (X86)	Ubuntu 16.04.6 (X86)	Ubuntu 16.04.6 (X86)	Ubuntu 16.04.6 (X86)	Ubuntu 16.04.6 (X86)	Ubuntu 16.04.6 (X86)	Ubuntu 16.04.6 (X86)	Ubuntu 16.04.6 (X86)
	IP protection	IP65 / Front	IP65 / Front	IP65 / Front	IP65 / Front	IP65 / Front	IP65 / Front	IP65 / Front	
Mechanical & Environment	Power input	DC 12V	DC 12V	DC 12V	DC 12V	DC 12V	DC 12V	DC 12V	
	Power Consumption	20W	30W	30W	30W	30W	35W	40W	
	Operating	-20~70°C	-20°C~70°C	-20°C~70°C	-20°C~70°C	-20°C~70°C	-20°C~70°C	-30°C~80°C	-20~70°C
	Storage	-30°C~80°C	-30°C~80°C	-30°C~80°C	-30°C~80°C	-30°C~80°C	-30°C~80°C	-30°C~80°C	-30°C~80°C
Dimension (WxHxD)	234x157x65			301x239x55.5	301x239x55.5	390x315x74.6	426x277x66.2	600x370x84	

# 03 Installation Reference



15" Panel pc installation in Jeju Island



8" Panel pc installation in Jeju Island



12.1" Panel pc installation in Jeju Island



8" Panel pc installation in Jeju Island



12.1" Panel pc installation in Jeju Island



8" Panel pc installation in Jeju Island

## 03 Installation Reference



11.6" panel pc at a highway service area in Ansong



8" & 12.1" Panel pc installation in Ulleungdo Island

ODHitec Co., Ltd –  
**Outdoor LCD**

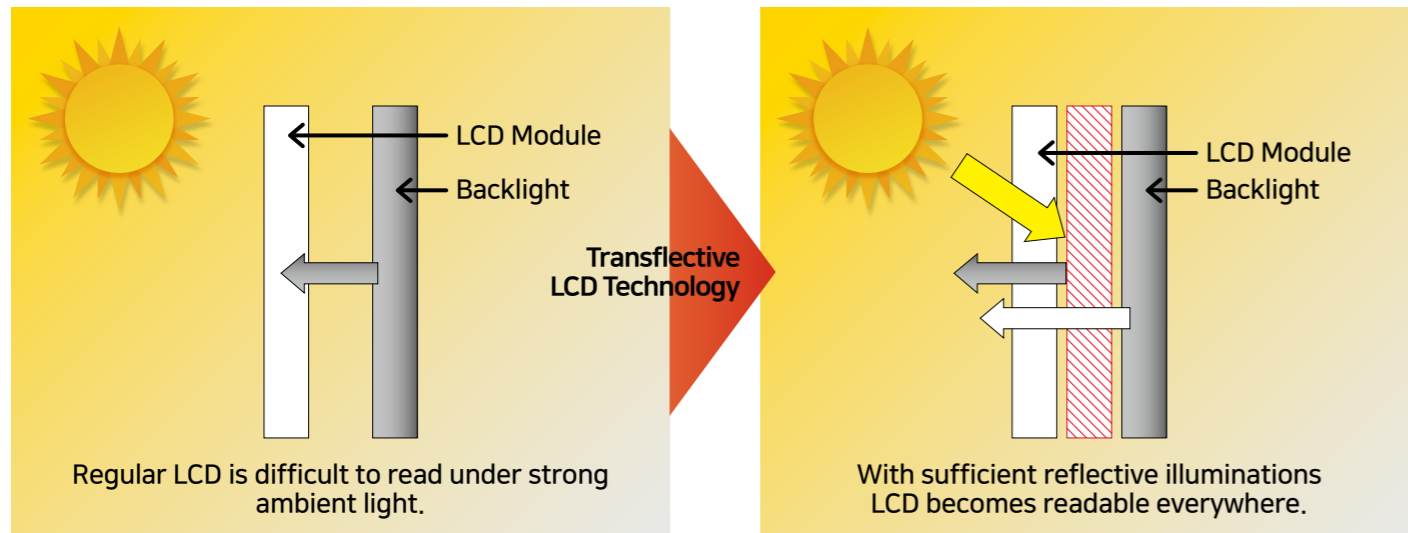
# 01 Sunlight Readable LCD

» What is the Sunlight Readable technology?

Sunlight readable LCD or daylight readable technology can be applied to certain selected regular TFT LCD to be introduced the LCD with a reflective function.

With the imposed reflective function, strong ambient light produces a brighter LCD display.

As a result, the modified LCD is viewable under the light conditions including direct sunlight.



Before



After

» Applying sunlight readable technology, you can enjoy vivid color expression and clear video under the direct sunlight with not much high brightness.

No	Size	OD model	Resolution	Brightness
1	7"	OD070TN94-ASR	800X480	700
2	8"	OD080TN64-ASR	1024X600	350
3	12.1" 4:3	OD121GNX-ASR	1024X768	500
4	15" 4:3	OD150XNE-ASR	1024X768	450
5	19" 4:3	OD190ETN01-ASR	1280X1024	350
6	21.5"	OD215WF3-ASR	1920X1080	250
7	23"	OD230WF3-ASR	1920X1080	250
8	32"	OD320EUN-BAS	1920X1080	600
9	75"	OD750EQN-ASR	3840X2160	350
10	86"	OD860EQN-ASR	3840X2160	450

» Not only our models but also other panels can be developed.



## 02 High brightness LCD

No	Size	OD model	Resolution	Nit
1	8"	OD080MIXH-10LAS	1024X600	1000
2	12.1"	OD121GNX-15LAS	1024X768	1500
3	12.1" 4:3	OD121SV01-15LAS	800X600	1500
4	15"	OD150XGL-15LAS	1024X768	1500
5	15" 4:3	OD150XGE-15LAS	1024X768	2000
6	15.6"	OD156HCE-10LAS	1920 X 1080	1000
7	19" 4:3	OD190ETN01-15LAS	1280X1024	1500
8	21.5"	OD215WF3-10LAS	1920X1080	1000
9	32"	OD320EUN-15LAS	1920X1080	1500
10	43"	OD430EUE-FHB1	1920 X 1080	1000



- >> With Backlight Tuning, perfectly fit to use for outdoor
- >> New model development & customized metal housing available
- >> Options : Optical Bonding, Open frame, Touch

## 03 Installation Reference

### Industrial Display



Self Lubricator



84" DID Outdoor Display



Bus Information System ( BIS)



65" Wall Display in Gangnam Cosmetic store



BIS, Changwon

ODHitec Co., Ltd –  
**Transparent LCD**



# 01 What is Transparent LCD?

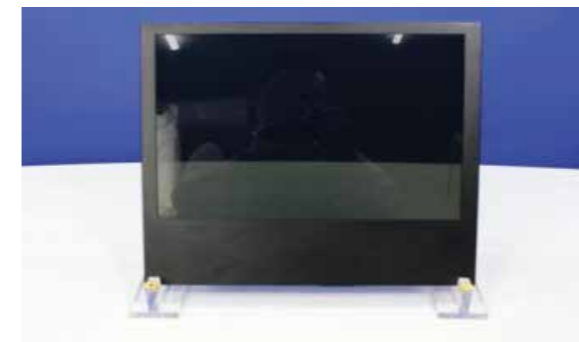


- » Transparent display is called as see-through display. It is usually clear like glass and it can be used like a monitor or TV if necessary.
- » Transparent display has functions; information recognition, information processing, and information transfer with using transparent electronic devices.
- » Due to showing visualized information with real object behind, transparent display can be installed very variously like windows for building, shops and instrument panel for car.

# 02 Transparent LCD Type

## 1. Transparent LCD Kit

- » **ODHitec Transparent Display Strength**  
We have full model line-up from 3.5" up to 98" and differentiated picture quality with our own technology and unique brightness and picture quality enhancement material application. More transparency, brightness and clear picture quality realized and every customers are quite satisfied with our quality once they adopt our models.
- » **Transparent LCD Display Kit:**
  - Optimized design Metal Frame for easy installation and high productivity
  - Various and Customized frame design supply specially developed for each application requirement
  - Standard: for Showcase and Landscape installation
  - T-LCD Kit for Fridge: for Refrigerator and Portrait installation/ T-LCD Kit for Video Wall



9.7"~19" Metal Guide



Media Board Kit



21.5"~98" Metal Guide



T-LCD LVDS Interface

# 02 Transparent LCD Type

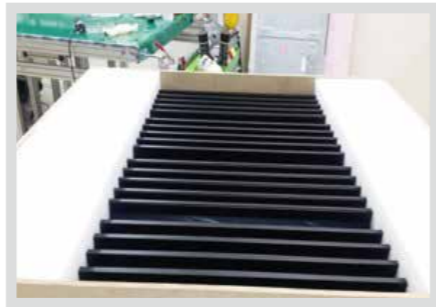
## 1. Transparent LCD Kit



84", 86", 98" T-LCD with Metal Guide (Custom-made)



Metal Guide for Fridge (Portrait)



Wooden Packing

Size	Model	Resolution	Active Display (WxL)mm
7"	OD070TN94-TAS	800 x 480	154.08 x 85.92
8"	OD080NA-TAS	800 x 600	162.0 x 121.5
8" (W)	OD080TN64-TAS	800 x 480	176.64 x 99.36
12.1"	OD121S1LG55-TAS	800 x 600	246 x 184.5
	OD121XN01-TAS	1024 x 768	245.76 x 184.32
15"	OD150X1LG92-TAS	1024 x 768	304.1 x 228.1
17"	OD170ETN01-TAS	1280 x 1024	337.920 x 270.336
19"	OD190E0A-TAS	1280 x 1024	374.748 x 299.827
21.5"	OD215WF3-TAS	1920 x 1080	476.06 x 267.79
23"	OD230WF3-TAS	1920 x 1080	509.184 x 286.416
24"	OD240WU8-TAS	1920 x 1200	518.4 x 324
27"	OD270WF5-TAS	1920 x 1080	597.888 x 336.312
32"	OD320EUN-TAS	1920 x 1080	698.4 x 392.9
43"	OD430EUE-TAS	1920 x 1080	941.184 x 529.416
75"	OD750EQN-TAS	3840 x 2160	1,650.24 x 928.26
86"	OD860EQN-TAS	3840 x 2160	1,895.04 x 1,065.96
98"	OD980DQD-TAS	3,840 x 2,160	2158.848 x 1,214.352

# 02 Transparent LCD Type

## 2. Transparent LCD Showcase

### » ALL About Transparent Display

Base on long experience and own know-how, ODHitec presents the most eye-catching design and unbeatable transparency Showcase models for your cost-effective marketing.

- Full model line up from 12.1" ~98"
- Customized design available
- Standard: with in-built Media Player (RGB, HDMI, USB Input)
- Full option: with IR Touch or PCAP Touch and Android board in-built or customized PC



21.5" T-LCD Showcase



15" Showcase, Custom design



12.1", 19" Basic design



32" Portrait Showcase

# 03 Installation Reference



12.1" at Cosmetic Store



47" at Hong Kong Department Store



55" at Woman's National History Museum



84" Transparent LCD at Avengers Station in Las Vegas & Paris



Japan Departments Store 84" Wall Transparent Display



42" Transparent LCD Video Wall at Japan Departments Store



47" Transparent Orange Juice Vending machine in China



84" Transparent LCD at Fashion Flag Store

# 04 Transparent OLED

➤ Unbeatable Transparency and Visibility with tempered Glass Optically bonded 55" Transparent Organic Light Emitting Diode (OLED) Display with 38% High Transmittance and High-Speed response Life-like Color reproduction.

100% Viewing Angle Free with NO off-axis Contrast Ratio Low power consumption Various and Customized supply format for each application requirement.

Model		OD550JUL-TOLED
Specification		
Transparent OLED	Display Size	55"
	Pixel Format	1920 x 1080
	Active size (WxH)mm	1,221.5 x 6699.35
	Pixel Pitch	0.630mm x 0.630mm
	Color Depth	10bit, 1.07 Billion
	Viewing Angle (U/D/L/R)	R/L 120 (min.), U/D 120 (min.)
	Surface Treatment	Tempered glass bonded(5t)
	Luminance, White	400 / 150 cd/m2 (Center 1point ,Typ.)
	Transparency	38%
A/D Board	Input Source	HDMI x2, DP x1
	Stand	Stand, Guide type
	Option	Speakers/ PCAP Touch/ Frame / Mini PC
	Accessory	Power cord, RC



55 T-OLED\_without frame



55 T-OLED\_without frame