



# LED Screen Full Color

**Instruction Manual**



**LED Display Screen Indoor /  
Outdoor  
FAQ (Frequently Asked  
Questions)**

*Unpacking:* Thank you for purchasing the AZTEC LED Display Full Color Indoor / Outdoor by AZTECELECTRONIC®.

Below are the Lists of Frequently Asked Questions regarding LED Displays:

### **FREQUENTLY ASKED QUESTIONS (FAQ)**

#### **English:**

1. What dimension will your LED screen display or LED sign be that you want to install?

The size of the outdoor LED screen displays and LED signs are very important to know to determine the resolution per square meter we have to set for the screen. This is to avoid low quality video with

very little detail or a very high quality video that is not necessary (in some cases it depends on the customer's project type). The variable that decides the LED screen resolution per square meter is called the pixel pitch, which tells us the distance between the LED's in millimeters. The shorter the distance of the LED's, the higher the screen resolution per square meter, and a greater distance, the resolution will be less.

In other words, small LED screen displays require a higher resolution per square meter to achieve complete resolution of the screen (Our recommendation would be a minimal of 24,000 - 43,000 pixels for video standard quality without losing detail) and among the largest LED screen displays less resolution m<sup>2</sup> is needed to reach a total of 24,000 - 43,000 pixels resolution.

Remember that LED screen displays that will show videos with a normal quality standard must have a minimal of at least 43,000 physical pixels (or real pixels) in total, and high definition LED display screens at least a total of 60,000 physical pixels (or real pixels). If you require a glare LED screen display where the closest viewing distance is very small, 8 meters for example, we recommend LED screen displays with virtual pixels. With virtual pixels, the number of physical pixels will be multiplied with a factor of 4. This means that if a LED display screen has a total of 50000 physical pixels has a total of 200,000 virtual pixels. The minimal viewing distance will be half of the distance of a LED screen display with real pixels. For more information about the difference between virtual pixel LED displays and real pixel LED displays read this FAQ.

We will take as an example on this page a 15 square meter LED display screen, that will be display video and text, to show you how to make your decision on configuring your LED display screen.

## ***2. What will be the minimal viewing distance from your LED screen display to the closest spectators?***

The minimal viewing distance is the distance from where the closest spectators will be viewing the LED display and the LED screen display itself, taking the hypotenuse (a hypotenuse is the longest side of a right triangle, the side opposite of the right angle) in this case. How can we calculate the hypotenuse? It's easy; the length of the hypotenuse of a right triangle can be found using the Pythagorean theorem, which states that the square of the length of the hypotenuse equals the sum of the squares of the lengths of the two other sides. That means  $H^2 = L^2 + A^2$ , and in practice would be as follows: if H = Hypotenuse, L = Length, A = Altitude:

*We want to set a screen at a height of 12 meters where the nearest spectator will see the screen from a distance of 5 meters. The calculation would be following:*

$$H^2 = 5^2 + 12^2 \Rightarrow H^2 = 25 + 144 \Rightarrow H^2 = 169 \Rightarrow H = \sqrt{169} \Rightarrow 13 \text{ meters.}$$

***So we need to find a LED display screen of 15 sqm with a configuration that will give us a minimal viewing distance of approximately 13 meters.***

## ***3. What will be the total resolution of the LED screen display?***

To find out if we have the right configuration for your LED screen display, that will show videos of normal quality or high-definition videos, we have to make another kind of simple calculation. In point two we mentioned an important point about showing videos with a normal standard definition, where we consider a screen with at least 43,000 pixels, or a screen with a high-definition video, with at least 60,000 pixels or more. Now we have to calculate this, the calculation is as follows: the total size of the LED screen display multiplied by the resolution per square meter of the configuration you chose with point 2.

For example, if we want to install a 15 square meter LED display screen, and the closest viewing distance is 13 meters (like we calculated in point 2) we can choose a LED display screen of 16mm with physical pixels and virtual pixels, or 20mm with virtual pixels. Why 16mm real pixel and 20mm virtual pixel? Because the closest viewing distance of these configurations are about > 15 meters. So in this case, (1) for the 16mm real pixel LED display the total number of physical pixels is 3,906 per sqm, (2) for the 16mm virtual pixels  $3,906 \times 4 = 15,624$  total virtual pixels, (3) and for the 20mm virtual pixel LED display it will be 2,500 physical pixels per sqm  $\times 4 = 10,000$  virtual pixels per sqm. So the final calculation will be:

1. **16mm real pixel:** the total resolution of the LED display screen will be  $15 \text{ sqm} \times 3,906 = 58,590$  total real pixels
2. **16mm virtual pixel:** the total resolution of the LED display screen will be  $15 \text{ sqm} \times 15,624$  virtual pixels = 234,360 total virtual pixels;
3. **20mm virtual pixel:** the total resolution of the LED display screen will be  $15 \text{ sqm} \times 10,000$  virtual pixels = 150,000 total virtual pixels.

Conclusion: The LED display screen with the most effective will be the 20mm virtual pixel LED display screen because of its price, quality and viewing distance. Although if you require a higher quality LED display for showing high quality videos, of course we recommend then the 16mm real pixel LED display because of the viewing distance and the total quantity of physical pixels which is around 60,000 pixels, but of course the price will be higher than the 20mm virtual pixel LED display. Real pixel LED displays are always better than virtual pixel LED displays.

#### ***4. Choosing the LED screen display that correspond to your expectations***

With the examples we have shown in points 1, 2 and 3 our LED screen display configuration will be a 15 sqm with a closest viewing distance of 13 meters and a resolution of 10,000 virtual pixels per sqm (the electronic LED display screen will be showing normal quality video). Looking at the table below, there are only two options for us, which are:

1. A LED screen display with 16mm real pixels; this configuration is for LED screens with a dimension bigger than 11sqm. Besides that LED screens displays has a viewing distance from 15 meters and more, which is about what we calculate (13 meters we calculated), and  $15\text{sqm} \times 3906 \text{ pixels per sqm} = 58,590 \text{ pixels in total (aprox.)}$  which is more than what we need but the quality and definition will be very high.
2. A LED screen display with 20mm virtual pixels: this configuration is for LED screens with a dimension bigger than 15sqm which is equal to what we want to configure. Besides that LED screens displays has a viewing distance from 15 meters and more, which is about what we calculate (13 meters we calculated), and  $15\text{m}^2 \times 2500 \text{ pixels/m} = 37,500 \text{ real pixels in total, and } 37,500 \times 4 = 150,000 \text{ virtual pixels (aprox.)}$  which is more than what we need but the quality and definition will be very high.

#### **Indonesian:**

#### **1. Bagaimana cara untuk menentukan Ukuran dari LED Screen Display atau LED Signage yang akan dipasang?**

Cara terbaik menentukan Ukuran LED Display Screen Outdoor ataupun LED Signage adalah dengan menentukan Resolusi Per meter Persegi yang akan digunakan di LED Display Screen. Ini adalah hal terpenting untuk menghindari resolusi kurang memadai dimana detail tidak terlihat ataupun terlalu berlebihan kualitas video yang tidak diperlukan (Note. Dalam beberapa hal ini tergantung dari Projects LED Display tersebut). Unsur inilah yang menentukan Resolusi LED Display yang harus digunakan.

Kita Sebut unsure ini sebagai Pixel Pitch, dimana diukur dengan jarak antara LED dalam hitungan millimeter.

Dengan Pengertian, Ukuran LED Display Kecil membutuhkan Resolusi Tinggi per meter persegi untuk mendapatkan Resolusi yang besar. (Rekomendasi kami biasa memerlukan minimal 24,000 – 43,000 pixels untuk Kualitas Video Standard tanpa mengurangi detail gambar) dan dari semua LED Display Screen Ukuran Besar memerlukan Resolusi per meter persegi yang lebih dikit dapat mencapai resolusi minimal 24,000 – 43,000 pixels tersebut.

Perlu diingat adalah standard LED Display dalam menampilkan Kualitas Standard memerlukan sedikitnya Total 43,000 physical pixels (atau disebut sebagai real pixels). dan did alam HD LED Display Screen memerlukan sedikitnya Total 60,000 physical pixels (atau disebut sebagai real pixels). Apabila membutuhkan tipe Led Display dengan tipe Glare memerlukan LED Display dengan Jarak Pandang terkecil dan paling rapat, sebagai contoh: 8 Meters, kami rekomendasikan tipe LED Screen Display dengan Virtual Pixels. Dengan Virtual Pixels, banyaknya Physical Pixels akan di kalikan factor 4. Artinya apabila LED Display dengan total contohnya 50,000 physical Pixels akan mempunyai total 200,000 virtual pixels. Jadi Jarak Pandang terendah akan setengah dari Jarak LED Display dengan Real Pixels. Untuk informasi lebih lanjut mengenai Virtual Pixels LED Display dengan Real Pixels LED Display anda dapat membaca lebih lanjut di FAQ ini.

Kita akan mengambil contoh dalam lembaran ini adalah 15 Meter Persegi LED Display Screen akan memberikan Display Video dan Text, untuk memberikan gambaran dan informasi tentang LED Display yang akan anda pilih.

## 2. Berapa Jarak Minimal dari LED Display Screen ke Penonton terdekat?

Jarak Terdekat Minimal adalah Jarak dimana Penonton Pertama anda akan melihat LED Display Screen tersebut. Dengan rumus Phytagoras dapat menghasilkan Hypotenuse. Bagaimana Cara Menghitung Hypotenuse? Sangat Mudah, Jakrak dari Hypotenuse dalam sebuah segitiga dengan menggunakan Rumus Phytagoras Teori, dimana adalah berbanding persegi antara Jarak Panjang dan Tinggi ( $c^2 = a^2 + b^2$ ) dimana c adalah Hypothenuse, A = Panjang, B = Tinggi.

Jadi apabila kita akan membuat Tinggi Display di 12 Meter, dimana Jarak terdekat pandangan pertama dari Display adalah 5 Meter, Perhitungannya adalah sebagai berikut:

$$C^2 = 5^2 + 12^2 \Rightarrow C^2 = 25 + 144 \Rightarrow C^2 = 169 \Rightarrow C = \sqrt{169} \Rightarrow 13 \text{ meters.}$$

**Dari Hasil Perhitungan ukuran LED Display Screen yang diperlukan adlaah 15 sqm dengan konfigurasi yang akan memberikan jarak minimal pandangan pertama dengan perkiraan jarak 13 Meter.**

## 3. Berapakah Total Resolusi yang akan di dapatkan dalam LED Display yang akan dipasang?

Untuk mengetahui konfigurasi terbaik dari LED Display Screen anda, untuk menunjukkan Video dengan Kualitas Standard ataupun Kualitas Video HD, kita harus melakukan perhitungan standard. Dalam Point Nomor 2, telah di informasi kan tentang point penting dalam menunjukkan video dengan kualitas standard, dimana kita harus mempunyai setidaknya 43,000 pixels resolusi atau ukuran screen dengan Video HD harus mempunyai setidaknya 60,000 pixels.atau lebih. Sekarang kita harus kalkulasi kan sebagai berikut. Dengan Total Ukuran LED Display di kalikan dengan resolusi per meter persegi dari konfigurasi yang dipilih di Point 2.

Sebagai contoh, apabila kita akan membuat ukuran LED Display Screen 15 Meter Persegi, dan dengan jarak minimum penglihatan terdekat adalah 13 Meter (seperti yang sudah kita kalkulasikan di Point nomor 2) kita akan memilih LED Display dengan Pitch 16 mm dengan Real Pixels dan Virtual Pixels atau 20 mm dengan Virtual Pixels. Kenapa 16 mm dengan Real Pixels dan 20 mm dengan Virtual Pixels? Karena Jarak Terdekat Pandagan Pertama untuk Konfigurasi ini adalah sekitar 15 Meter, jadi untuk contoh ini (1) untuk Real Pixels 16 mm dengan total Physical Pixels adalah 3,906 per sm (2) atau untuk 15 mm Virtual Pixels dengan  $3,906 \times 4 = 15,624$  Total Virtual Pixles (3) dan Untuk 20 mm Virtual Pixels LED Display dengan 2,500 Physical Pixels per sqm  $\times 4 = 10,000$  Virtual Pixels per sqm. Jadi dengan Kalkulasi sebagai berikut.

1. 16 mm Real Pixels dengan total Resolusi LED Display Screen menggunakan 15 sqm  $\times 3,906 = 58,590$  total Real Pixels
2. 16 mm Virtual Pixels dengan total Resolusi LED Display Screen menggunakan 15 sqm  $\times 15,624$  virtual pixels = 234,360 Total Virtual Pixels
3. 20 mm Virtual Pixels dengan total Reoslusi LED Display Screen menggunakan 15 sqm  $\times 10,000$  Virtual Pixels = 150,000 Total Virtual Pixles.

Hasil: LED Display yang paling efektif adalah 20 mm Virtual Pixles LED Display Screen dengan konsiderasi untuk dari Harga / Kualitas dan Jarak Pandang yang paling efficient dan efektif. Walaupun anda memerlukan Kualitas LED Display yang lebih tinggi untuk menunjukkan kualitas Video yang lebih baik, tentunya kami akan memberikan rekomendasikan dengan 16 mm Real Pixels LED Display karena untuk Jarak Pandang dan total Quantity Physical Pixels sekitar 60.000 Pixels, tetapi tentunya Harga akan lebih tinggi dari 20 mm Virtual Pixels LED Display. Real Pixels LED Display selalu lebih bagus disbanding Virtual Pixels LED Displays.

#### **4. Memilih LED Display Screen dengan hasil yang sesuai dengan kebutuhan anda.**

Dengan contoh yang kami berikan dalam Point 1, 2 dan 3, LED Display Screen kami dengan konfigurasi 15 sqm memiliki Jarak Pandang Minimal 13 Meter dan Resolusi 10,000 Virtual Pixels per sqm ( dengan Electronic LED Display Screen akan memberikan Kualitas Video Normal). Silahkan Melihat Tabel dibawah untuk Opsi terbaik adalah:

1. LED Display Screen dengan 16 mm Real Pixels, konfigurasi ini direkomendasikan untuk ukuran yang lebih besar dari 11 sqm. Selain dengan LED Display Screen mempunyai Jarak Pandang Minimal dari 15 Meter dan lebih. Dimana kita kalkulasikan (13 meter dari hasil kalkulasi) dan  $15 \text{ sqm} \times 3,906 \text{ pixels per sqm} = 58,590 \text{ Pixels Totalnya (Perkitaraan)}$ . Dimana akan lebih dari yang kita butuhkan tetapi kualitas dan definisi Video akan jauh lebih baik dan tinggi.
  2. LED Display Screen dengan 20 mm Virtual Pixels, Konfigurasi ini adalah untuk Dimensi LED Display Screen yang lebih besar dari 15 sqm. dimana adalah sebanding dengan konfigurasi. Selain LED Display Screen mempunyai minimal Jarak Pandang dari 15 Meter atau lebih, seperti kalkulasi sebelumnya ( 13 Meter) dan  $15 \text{ Meter persegi} \times 2,500 \text{ Pixels} = 37,500 \text{ real Pixels Total dan } 37,500 \times 4 = 150,000 \text{ Virtual Pixels ( Perkitaraan)}$ . Dimana akan lebih dari yang dibutuhkan mempunyai kualitas dan definisi yang tinggi juga.
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## AZTEC LED DISPLAY SCREEN OUTDOOR – PH-10 (REAL PIXELS RESOLUSI)

### Technical parameter:

No	Item	Parameter
<b>Module</b>		
1	LED encapsulation mode	Φ 4 oval lamp
2	Horizontal Viewing Angle	140°
3	Vertical Viewing Angle	70°
4	Pixel composition	1R1G1B
5	Pixel pitch	10 mm
6	Scan Method	1/2
7	Drive method	constant current
8	Module resolution	16x16 pixel
9	Module dimensions	160x160 mm
10	Module type	Independent drive board
11	Module working voltage	+5v
12	Average Power Consumption	20w
13	Maximum Power Consumption	5w
14	Module shell material	PC
15	Module mask material	PC
<b>Cabinet</b>		
1	Module layout (WXH)	6x6 modules
2	Cabinet resolution	96x96 pixels
3	Cabinet maximum power Consumption	600w
4	Cabinet average power Consumption	150w
5	Cabinet dimension	960x960 mm
6	Cabinet material	steel /aluminum alloy
7	Cabinet color	black /gray
8	Protection grade (front /back)	IP65 /IP54
<b>Screen</b>		
1	Application environment	outdoor
2	White balance brightness	> 8000 cd /m <sup>2</sup>
3	White balance coordinates	X=0.29, Y=0.31
4	Contrast	6400:1
5	Color temperature	3200 - 9300 K Adjustable
6	Pixel density (dot /m <sup>2</sup> )	10000
7	Average Power consumption (W /m <sup>2</sup> )	244
8	Maximum Power consumption (W /m <sup>2</sup> )	977
9	Power source	AC220v /50 Hz or AC110v /60 Hz
10	Operating temperature	-20°C ~ +50°C
11	Operating humidity	10% ~ 90%
12	Storage humidity	-20°C ~ +50°C
13	Refresh frame rate	50 Hz - 60 Hz
14	Refresh rate	≥ 1920 Hz
15	Viewing distance	10 - 100 m
16	Grayscale level	≥ 10 Bit
17	Colors	280 Trillions
18	Brightness adjustment	0 - 100% software /schedule /auto
19	Control method	Synchronization
20	Signal transfer distance	Network cable : 100 m, fiber optical, wifi
21	Computer operating system	WINDOWS (98, 2000, XP, Vista, 7)
22	Video signal	VGA, DVI, RF, S-Video, RGB, RGBHV, YUV, YC, COMPOSITE HDMI and so on.
23	LED Lifetime	≥ 100000 hours

## AZTEC LED DISPLAY SCREEN OUTDOOR – PH-12 (REAL PIXELS RESOLUSI)

### Technical parameter:

No	Item	Parameter
<b>Module</b>		
1	LED encapsulation mode	Φ 4 oval lamp
2	Horizontal Viewing Angle	140°
3	Vertical Viewing Angle	70°
4	Pixel composition	1R1G1B
5	Pixel pitch	12 mm
6	Scan Method	1/4
7	Drive method	constant current
8	Module resolution	16x16 dots
9	Module dimensions	192x192 mm
10	Module Type	Integration Of Lamp Board And Driver Board
11	Module working voltage	+5v
12	Average Power Consumption	5w
13	Maximum Power Consumption	22w
14	Module shell material	PC
15	Module mask material	PC
<b>Cabinet</b>		
1	Module layout (WXH)	6x6 piece
2	Cabinet resolution	96x96 pixels
3	Cabinet maximum power Consumption	990w
4	Cabinet average power Consumption	250w
5	Cabinet dimension	1152x1152 mm
6	Cabinet material	steel /aluminum alloy
7	Cabinet color	black /gray
8	Protection grade (front /back)	IP65 /IP54
<b>Screen</b>		
1	Application environment	outdoor
2	White balance brightness	> 7000 cd /m <sup>2</sup>
3	White balance coordinates	X=0.29, Y=0.31
4	Contrast	64000:1
5	Color temperature	3200 - 9300 K Adjustable
6	Pixel density (pixels /m <sup>2</sup> )	6944
7	Average Power consumption (W /m <sup>2</sup> )	187
8	Maximum Power consumption (W /m <sup>2</sup> )	746
9	Power source	AC220v /50Hz or AC110v /60Hz
10	Operating temperature	-20°C ~ +50°C
11	Operating humidity	10% ~ 90%
12	Storage humidity	-30°C~ +50°C
13	Refresh frame rate	50 Hz - 60 Hz
14	Refresh rate	≥ 1920 Hz
15	Viewing distance	12 - 120 m
16	Grayscale level	≥ 10 Bit
17	Colors	280 Trillions
18	Brightness adjustment	0 - 100% software /schedule /auto
19	Control method	Synchronization
20	Signal transfer distance	Network cable : 100 m, fiber optical, wifi
21	Computer operating system	WINDOWS (98, 2000, XP, Vista, 7)
22	Video signal	VGA, DVI, RF, S-Video, RGB, RGBHV, YUV, YC, COMPOSITE HDMI and so on.
23	LED Lifetime	≥ 100000 hours



## AZTEC LED DISPLAY SCREEN OUTDOOR – PH-16 (VIRTUAL PIXELS RESOLUSI)

### Technical parameter:

No	Item	Parameter
<b>Module</b>		
1	LED encapsulation mode	Φ 5 oval DIP
2	Horizontal Viewing Angle	135°
3	Vertical Viewing Angle	60°
4	Pixel composition	2R1G1B
5	Pixel pitch	16 mm
6	Virtual pixel pitch	8 mm
7	Scan Method	1/2
8	Drive method	constant current
9	Module resolution	16x8 dots
10	Module virtual resolution	32x16 mm
11	Module dimensions	256x128 mm
12	Module Type	Integration Of Lamp Board And Driver Board
13	Module working voltage	+5v
14	Average Power Consumption	9w
15	Maximum Power Consumption	36w
16	Module shell material	PC
17	Module mask material	PC
<b>Cabinet</b>		
1	Module layout (WXH)	4x6 pieces
2	Cabinet resolution	64x48 dots
3	Cabinet virtual resolution	128x96 dots
4	Cabinet maximum power Consumption	1080w
5	Cabinet average power Consumption	270w
6	Cabinet dimension	1024x768 mm
7	Cabinet material	steel /aluminum alloy
8	Cabinet color	black /gray
9	Protection grade (front /back)	IP65 /IP54
<b>Screen</b>		
1	Application environment	outdoor
2	White balance brightness	> 10000 cd /m <sup>2</sup>
3	White balance coordinates	X=0.29, Y=0.31
4	Contrast	64000:1
5	Color temperature	3200 - 9300 K Adjustable
6	Pixel density (pixels /m <sup>2</sup> )	3960
7	Average Power consumption (W /m <sup>2</sup> )	343
8	Maximum Power consumption (W /m <sup>2</sup> )	1373
9	Power source	AC220v /50Hz or AC110v /60Hz
10	Refresh frame rate	50 Hz - 60 Hz
11	Refresh rate	≥ 1920 Hz
12	Viewing distance	15 - 300 m
13	Grayscale level	≥ 10 Bit
14	Colors	280 Trillions
15	Brightness adjustment	0 - 100% software /schedule /auto
16	Control method	synchronization
17	Signal transfer distance	Network cable : 100 m, fiber optical, wifi
18	Computer operating system	WINDOWS (98, 2000, XP, Vista, 7)
19	Video signal	VGA, DVI, RF, S-Video, RGB, RGBHV, YUV, YC, COMPOSITE HDMI and so on.
20	LED Lifetime	≥ 100000 hours

## AZTEC LED DISPLAY SCREEN OUTDOOR – PH-20 (VIRTUAL PIXELS RESOLUSI)

### Technical parameter:

No	Item	Parameter
<b>Module</b>		
1	LED encapsulation mode	Φ 5 oval DIP
2	Horizontal Viewing Angle	135°
3	Vertical Viewing Angle	60°
4	Pixel composition	2R1G1B
5	Pixel pitch	20 mm
6	Virtual pixel pitch	10 mm
7	Scan Method	static
8	Drive method	constant current
9	Module resolution	16x8 pixels
10	Module virtual resolution	32x16 mm
11	Module dimensions	320x160 mm
12	Module Type	Integration Of Lamp Board And Driver Board
13	Module working voltage	+ 5v
14	Average Power Consumption	11w
15	Maximum Power Consumption	43w
16	Module shell material	PC
17	Module mask material	PC
<b>Cabinet</b>		
1	Module layout (WXH)	4x6 pieces
2	Cabinet resolution	64x48 dots
3	Cabinet virtual resolution	128x96 dots
4	Cabinet maximum power Consumption	1290w
5	Cabinet average power Consumption	323w
6	Cabinet dimension	1280x960 mm
7	Cabinet material	steel /aluminum alloy
8	Cabinet color	black /gray
9	Protection grade (front /back)	IP65 /IP54
<b>Screen</b>		
1	Application environment	outdoor
2	White balance brightness	> 7000 cd /m <sup>2</sup>
3	White balance coordinates	X=0.29, Y=0.31
4	Contrast	64000:1
5	Color temperature	3200 - 9300 K Adjustable
6	Pixel density (pixels /m <sup>2</sup> )	2500
7	Average Power consumption (W /m <sup>2</sup> )	263
8	Maximum Power consumption (W /m <sup>2</sup> )	1060
9	Power source	AC220v /50Hz or AC110v /60Hz
10	Refresh frame rate	50 Hz - 60 Hz
11	Refresh rate	≥ 1920 Hz
12	Viewing distance	15 - 300 m
13	Grayscale level	≥ 10 Bit
14	Colors	280 Trillions
15	Brightness adjustment	0 - 100% software /schedule /auto
16	Control method	synchronization
17	Signal transfer distance	Network cable : 100 m, fiber optical, wifi
18	Computer operating system	WINDOWS (98, 2000, XP, Vista, 7)
19	Video signal	VGA, DVI, RF, S-Video, RGB, RGBHV, YUV, YC, COMPOSITE HDMI and so on.
20	LED Lifetime	≥ 100000 hours