

CHECKWEIGHER

AD-4961A



Discover Precision

Checkweigher with best -in-class 0.01 g resolution and high level 0.08 g (3σ) accuracy
Better accuracy in high speed range improved by increased environmental resistance
and newly equipped HPDF (High Performance Digital Filter)



AD-4961A-2KD2035
+
Stainless Steel Cover
(option)
+
Display Stand (option)



A&D's Checkweighers are used by customers in a variety of industries around the world, especially in the food industry. As a weighing product manufacturer that is well received by a wide range of customers, we have developed a Checkweigher that has evolved to enable faster processing. It is equipped with a load cell developed specifically for Checkweighers and a new CPU, as well as being waterproof (IP65 grade) as standard while being priced reasonably.

High accuracy (3σ): 0.08 g

A&D has achieved high accuracy (0.08 g, 3σ) by installation of a newly designed digital load cell unit and a CPU which enables high speed processing.



Accuracy in high speed range is improved by max. 80%.*
Contributes to increased productivity

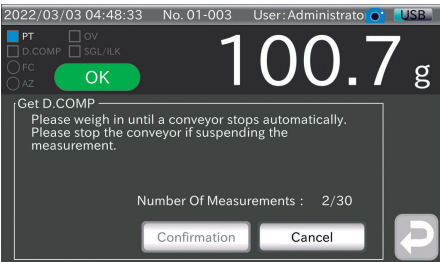
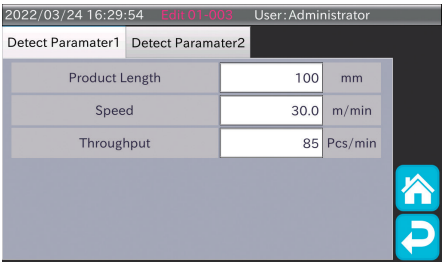
The design has evolved to be less susceptible to wind and vibration than previous models, and environmental resistance has been greatly improved.
AD-4961A series is equipped with a new CPU which has increased processing power, and the newly implemented vibration elimination filter HPDF (High Performance Digital Filter) has been optimized to increase accuracy by up to 80% at high speeds. *
Checkweighing process can be performed better at high speed range than conventional models, contributing to improved production capacity and efficiency.

* When compared to data from A&D's conventional models



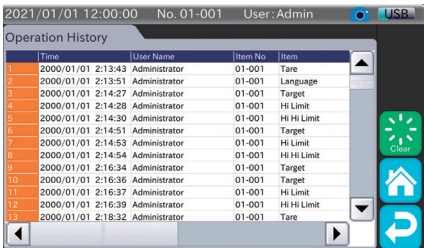
High repeatability checkweighing
by optimizing checkweighing settings

The optimum checkweighing settings are automatically set when the weight and length of weighed products, and throughput or conveyor belt speed are input.
Setting for vibration elimination filter (HPDF) is also automatically selected. So, checkweighing can be performed easily regardless of the operator. Also, dynamic compensation can also be set easily by passing products through repeatedly.



Assures consistent quality by way of the Operation History function
and restricting operation according to user level

Each user is registered and user level function allows you to restrict operations for each registered user.
The Operation History, which records users and operation details, as well as Weighing History can be saved onto a USB flash drive.
Weighing History can be summed up as a record for HACCP management by receiving signals of inspection results from an X-ray inspection system or a metal detector.



A&D Checkweigher

Touchscreen has evolved to be even easier to read and use, making it easy to set up even for first-time users.
Waterproof (IP65) as standard.
Easy to install Checkweigher that can easily be integrated with other equipment.

Waterproof structure: IP65
Stainless steel cover for display unit is available as an option.

Equipped with a 7-inch color touchscreen and a new CPU, operability has been improved and AD-4961A series is easier to use.
AD-4961A series have high visibility and operability, and even first-time users can easily set up the system.
By registering and displaying a photo of the weighed product, a user can immediately check what product is being produced. The standard display unit is made of a reasonably priced, waterproof resin. If preferred, a stainless steel cover is also available as an option.



USB interface as standard specification

A wide variety of external interfaces for various types of communication.

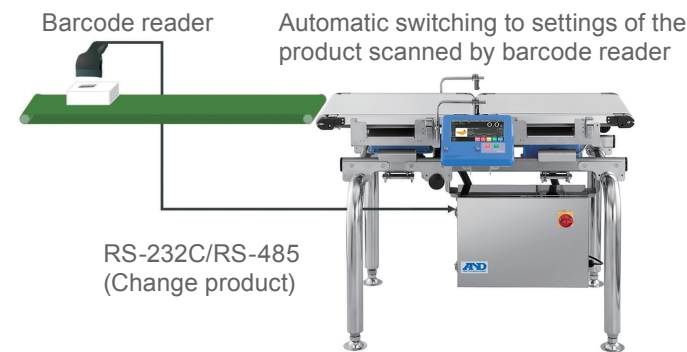
The provided contact points can be used to connect the outputs of Rejector and/or alarm, and also for the inputs from a metal detector or an X-ray inspection system, etc.
RS-232C or RS-485 (selectable) interface (for connecting to Modbus RTU, barcode reader, PC, PLC, etc.), wireless LAN functionality (for remote monitoring), wired LAN interface (for remote operation, Modbus TCP/IP, etc.), and USB interface are provided as standard features. These various connection interfaces enable a Checkweigher to be connected to an X-ray inspection system and/or metal detector.
Furthermore, data can be saved to a USB flash drive and output to a printer.
In addition, the communication function enables interlocking and linking to other devices in the production line.

* Modbus is a communication protocol developed by Modicon, Inc.

Automatic switching of product settings by reading barcode.

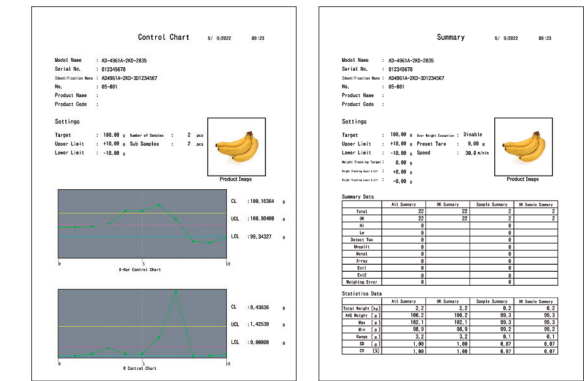
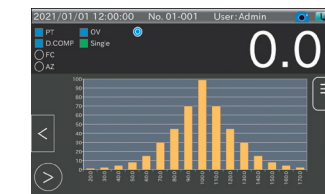
By reading the barcode on a product, the product settings on the Checkweigher are automatically switched to those of the scanned product.

*Barcode reader shall be prepared by the customer.



PDF output function reduces report creation time.
Screenshots can also be saved.

Summary results, control charts, and histograms can be displayed.
After checkweighing is complete, press the "PDF output" or "CSV output" key on the Summary screen of the data you want to save, and each file will be output to a USB flash drive.
A screenshot of the touchscreen can easily be saved to a USB flash drive by pressing the camera icon in the upper right corner.
You can use this function to create work instructions, manuals, and various reports.



Wireless LAN as standard feature enables remote monitoring.
Also, remote maintenance is available.

Wireless LAN function is equipped as a standard feature. *1 *2 Various data such as Summary Data can be monitored on tablets, etc., in another room, even during weighing.
Also, you can operate a Checkweigher from a PC by connecting it to a PC.
In addition, the AD-4961A can be used for offsite maintenance by "remotely operating" *3 a PC connected to the AD-4961A via LAN from another PC in a remote location via an Internet connection.

*1 The standard wireless LAN is for monitoring only and cannot be used for remote operation.

*2 Wireless LAN can be used depending on the regulations in your region.

*3 In addition to the AD-4961A, other necessary equipment such as a PC and an Internet connection must be provided by the customer.



Product line-up

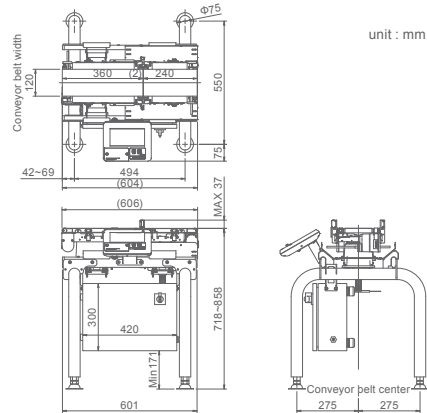
AD-4961A-6001224



Capacity
600 g

Resolution
0.01 g

Conveyor belt width
120 mm



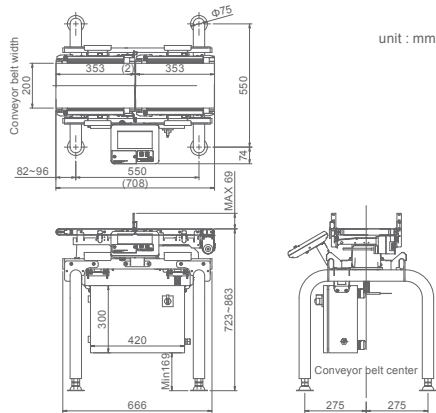
AD-4961A-2KD2035



Capacity (Dual range)
500 g / 2,000 g

Resolution
0.01 g / 0.1 g

Conveyor belt width
200 mm



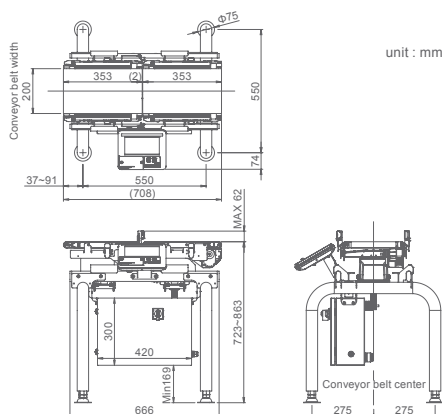
AD-4961A-6K2035



Capacity
6,000 g

Resolution
0.1 g

Conveyor belt width
200 mm



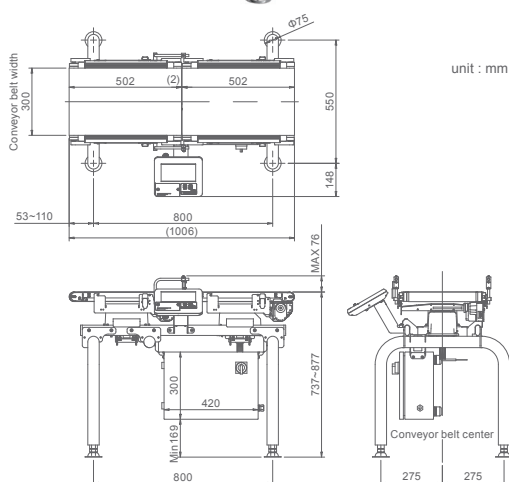
AD-4961A-6K3050



Capacity
6,000 g

Resolution
0.1 g

Conveyor belt width
300 mm



Specification

Model	AD-4961A-6001224	AD-4961A-2KD2035	AD-4961A-6K2035	AD-4961A-6K3050
Capacity	600 g	500 g / 2,000 g	6,000 g	
Resolution	0.01 g	0.01 g / 0.1 g	0.1 g	
Accuracy (3σ) *1	0.08 g	0.08 g / 0.18 g	1.0 g	
Max. throughput	400 pcs/min	320 pcs/min	280 pcs/min (3 kg or less) 165 pcs/min (3 to 6 kg)	145 pcs/min
Conveyor belt width	120 mm	200 mm		300 mm
Conveyor length	Weighing: 240 mm Infeed: 360 mm	350 mm		500 mm
Conveying method	Urethane belt			
Conveyor belt speed	15 to 120 m/min		10 to 100 m/min (3 kg or less) 10 to 60 m/min (3 to 6 kg)	10 to 80 m/min
Product length	22 to 200 mm	30 to 300 mm		80 to 450 mm
Max. product width	120 mm	200 mm		300 mm
Weighing sensor	Strain gauge load cell			
Display	LCD color display with 7 inch touchscreen			
Operation method	Touchscreen (resistive film type) and operation buttons			
Number of registrable products	1,000 products (10 groups x 100 products)			
Communication functions	RS-232C or RS-485 (for Modbus RTU, barcode reader *3, PC, PLC, dot impact printer, etc.)			
	IEEE 802.11b/g/n (Wireless LAN) *4 *5 (for remote monitoring)			
	100BASE-T (Wired LAN for remote operation *6, Modbus TCP and PostScript compatible printer)			
	USB (for USB flash drive [Data storage and image import use] *7)			
External input/output	Input: Non-voltage contact input 8 points (option available to expand to max. 24 points) *8 Output: Relay output 8 points (option available to expand to max. 28 points) *8			
Dust-/water-proof	IP65 compliant			
Operation temperature / humidity range	0 to 40°C / humidity 85% or less (with no condensation)			
Power supply	Single phase AC 100 to 240 V (+10% / -15%), 50 / 60 Hz, Approx. 180 VA			
	Electric power source should be connected to terminal.			
	Power cable should be provided by the customer.			
Weight *2	Approx. 35 kg		Approx. 38 kg	Approx. 50 kg
Material	Weighing unit: Stainless steel and PC/ABS resin			
	Conveyor unit: Aluminum (alumite coating) and stainless steel *9			
	Control unit: Stainless steel, Base unit: Stainless steel			

*1 Depends on the shape and the condition of the product and installation environment
*2 Weight is for the standard condition without option and/or Rejector.
*3 Barcode reader shall be prepared by the customer.
*4 Reception sensitivity of wireless LAN depends on radio wave environment. For continuous monitoring, it is recommended to use a combination of the HMI indicator and the Modbus communication function via RS-485 or wired LAN as communication may be interrupted.
*5 Wireless LAN can be used depending on the regulations in your region.
*6 An Internet connection and a system for remote operation are required. Please consult with your sales staff for further detail.
*7 USB flash drive should be formatted in FAT32.
*8 Maximum number of input/output points that can be added will depend on the combination of additional input/output points. Please consult with your sales staff for further detail.
*9 Aluminum (alumite coating) and PP resin in some units of AD-4961A-6001224

NOTE Power cable is not included. Please prepare a φ4-7mm cable.

Options



1	Display Stand	AD-4961-01
2	Tower Light (Comparator Light) (3 colors of red, yellow and green)	AD-4961-02 *1
3	Stainless Steel Cover	AD-4961A-24 *2
4	Additional External Output (4 points)	AD-4961A-43-1 *3
5	Additional External Output (8 points)	AD-4961A-43-2 *3
6	Additional External Input (8 points)	AD-4961A-44 *3

*1 Display stand is required to mount this option.
Dust-/water-proof protection of the light part is IP53.
*2 Factory option.
*3 Maximum number of input/output points that can be added will depend on the combination of additional input/output points.

Main Unit	AD-4961A-6001224	AD-4961A-2KD2035
Upper Breeze Break	AD-4961A-11 *4	AD-4961-11 *5 or AD-4961A-11 *6
Lower Breeze Break	Equipped as standard	AD-4961A-2035-12 *6
Enhanced Lower Breeze Break (Cover of Upstream Side and Downstream Side)	AD-4961A-1224-12	Included in AD-4961A-2035-12
Product Guide for Infeed Conveyor	AD-4961A-1236-14 *7	AD-4961-14 *8
Product Guide for Weighing Conveyor	AD-4961A-1224-14 *7	
Cross Plate	AD-4961A-600-13	AD-4961-13

*4 Pass-height is 70/105/140 mm (adjustable in 3 steps).
*5 When choosing AD-4961-11 for Upper Breeze Break in AD-4961A-2KD2035 or AD-4961A-6K2035, AD-4961-11 can be installed without Lower Breeze Break. Pass-height is 135 mm (fixed).
*6 When choosing AD-4961A-11 for Upper Breeze Break in AD-4961A-2KD2035, Lower Breeze Break (AD-4961A-2035-12) is required. Pass-height is 65/100/135 mm (adjustable in 3 steps).
*7 Applicable product width is 30-120 mm.
*8 1 set of AD-4961-14 consists of both Product Guides for Infeed Conveyor and for Weighing Conveyor. Applicable product width is 50-200 mm.

Main Unit	AD-4961A-6K2035	AD-4961A-6K3050
Upper Breeze Break	AD-4961-11 *5 or AD-4961A-11 *9	Made to build order
Lower Breeze Break	AD-4961A-6KSM-12	Made to build order
Enhanced Lower Breeze Break (Cover of Upstream Side and Downstream Side)	AD-4961A-1224-12	Made to build order
Product Guide for Infeed Conveyor	AD-4961A-6KSM-14 *10	AD-4961-14-3050 *11
Product Guide for Weighing Conveyor	AD-4961A-6KSM-14 *10	AD-4961-14-3050 *11
Cross Plate	AD-4961-13	Made to build order

*9 When choosing AD-4961A-11 for Upper Breeze Break in AD-4961A-6K2035, Lower Breeze Break (AD-4961A-6KSM-12) is required. Pass-height is 65/100/135 mm (adjustable in 3 steps).
*10 2 sets are required when installing on both Infeed Conveyor and Weighing Conveyor. Applicable product width is 50-200 mm.
*11 2 sets are required when installing on both Infeed Conveyor and Weighing Conveyor. Applicable product width is 90-300 mm.

Calibration Weight

	OIML Class F1 Max. tolerance	Model
500 g	±2.5 mg	AD-1603-500F1
1 kg	±5.0 mg	AD-1603-1KF1
2 kg	±10 mg	AD-1603-2KF1
5 kg	±25 mg	AD-1603-5KF1



A&D Inspection Systems

Metal Detector AD-4976 Series



- ✓ Check for metal contaminant
- ✓ Check for missing metal item (e.g. aluminum sachet)
- ✓ Or both inspections above simultaneously (option)
- ✓ Sensor head is separately available

Model	Aperture width	Aperture height	Conveyor width	Maximum pass-height
AD-4976-3510	350 mm	100 mm	250 mm	80 mm
AD-4976-3517	350 mm	170 mm	250 mm	150 mm
AD-4976-3525	350 mm	250 mm	250 mm	230 mm
AD-4976-4517	450 mm	170 mm	350 mm	150 mm
AD-4976-4525	450 mm	250 mm	350 mm	230 mm

X-ray Inspection System AD-4991 Series



- ✓ Contaminant inspection not only for metal, but also other materials such as for resin, glass, rubber, stone, etc., with high detection sensitivity by contrast adjustment function.
- ✓ Other inspections such as Count, Position, Shape, Weight estimation can be performed simultaneously as standard specification.
- ✓ Missing inspection and Seal inspection can also be performed as options.

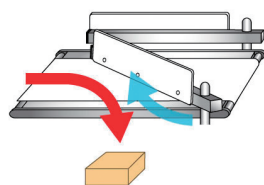
Model	Conveyor width	Maximum X-ray power output
AD-4991-2510	250 mm	100 W (50 kV_2 mA)
AD-4991-2515	250 mm	150 W (50 kV_3 mA)
AD-4991-3530	350 mm	300 W (75 kV_4 mA)
AD-4991-4530	450 mm	300 W (75 kV_4 mA)
AD-4991-6030	600 mm	300 W (100 kV_3 mA)

A&D Rejector

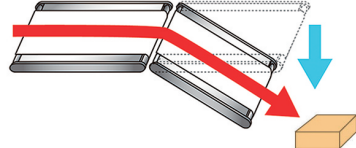
Automatic sorting of non-conforming products by the Rejector prevents human error and increases productivity.

Line-up

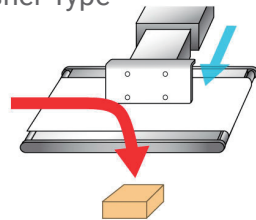
Flipper Type



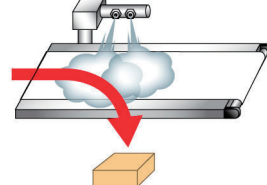
Conveyor Drop Type



Pusher Type



Air Jet Type



Flipper Type AD-4981 Series

Box / Case

Tall bag

Rejection direction
Max. 3 ways

Arm swings to automatically reject non-conforming products off the conveyor.
Most versatile of the sorting methods and is ideal for boxes, tall bags and cases.



Model	AD-4981-2057	AD-4981-2570	AD-4981-3585
Item code	AD-4981-2057 (Complete set of Arm on both sides, Conveyor & Base)	AD-4981-C2570 (Conveyor) AD-4981-FR2570 (Right Arm) AD-4981-FL2570 (Left Arm) AD-4981-B79XX (Base)	AD-4981-C3585 (Conveyor) AD-4981-FR3585 (Right Arm) AD-4981-FL3585 (Left Arm) AD-4981-B79XX (Base)
Conveyor belt width	200 mm	250 mm	350 mm
Max. screening capacity *1	120 pcs/min	100 pcs/min	80 pcs/min
Air supply *2	0.5 Mpa 0.2 NL/time Φ6 mm Polyurethane tube		0.5 Mpa 0.4 NL/time Φ6 mm Polyurethane tube
Reject Confirmation (Option)	Made to build order	1 direction: AD-4981-2570-34 2 directions: AD-4981-2570-35 3 directions: AD-4981-2570-36	

Pusher Type AD-4983 Series

Box

Heavy individually
packaged product

Rejection direction
Max. 2 ways

Non-conforming products are pushed off the conveyor.
Most suitable for boxes or tall bags.



Model	AD-4983-3050
Item code	AD-4983-3050 (Complete set of Conveyor, Pusher & Base)
Conveyor belt width	300 mm
Max. screening capacity *1	60 pcs/min
Air supply *2	0.5 Mpa 2.6 NL/time Φ8 mm Polyurethane tube
Reject Confirmation (Option)	Made to build order

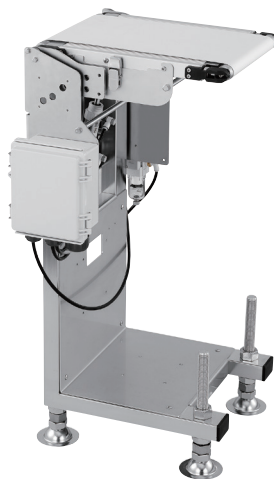
Conveyor Drop Type AD-4982 Series

Thin bag *3

Sheet-like
material

Rejection direction
Max. 2 ways

Non-conforming products are automatically rejected down the conveyor by the
movement of the conveyor.
Suitable for thin bags and sheet-like materials.



Model	AD-4982-2035	AD-4982-2540	AD-4982-3550
Item code	AD-4982-2035 (Conveyor) AD-4982-11-79 (Base) *4	AD-4982-C2540 (Conveyor) AD-4982-11-79 (Base)	AD-4982-C3550 (Conveyor) AD-4982-B3550 (Base)
Conveyor belt width	200 mm	250 mm	350 mm
Max. screening capacity *1	150 pcs/min	100 pcs/min	60 pcs/min
Air supply *2	0.5 Mpa 0.3 NL/time Φ6 mm Polyurethane tube		0.5 Mpa 0.9 NL/time Φ6 mm Polyurethane tube
Reject Confirmation (Option)	Made to build order		

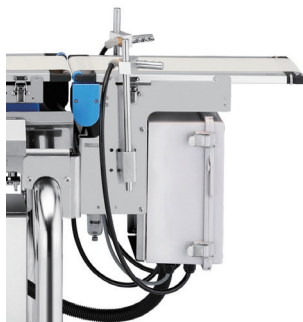
Air Jet Type AD-4984 Series

Light individually
packaged product

High speed
rejection

Rejection direction
Max. 3 ways

Air is blown to automatically reject non-conforming products off the conveyor.
Ideal for small, light, individually packaged products and enables high-speed sorting.



Model	AD-4984-1246	AD-4984-2046
Item code	AD-4984-1246 (Conveyor & Air Nozzle) AD-4982-11-79 (Base) *5	AD-4984-2046 (Conveyor & Air Nozzle) AD-4982-11-79 (Base) *6
Conveyor belt width	120 mm	200 mm
Max. screening capacity *1	400 pcs/min	320 pcs/min
Air supply *2	0.5 Mpa 2.4 NL/time Φ10 mm Polyurethane tube	
Reject Confirmation (Option)	Made to build order	

*1 Actual screening capacity is dependent on the shape and/or the condition of the screened item and/or environment of the installation room.
*2 Please prepare compressed air with an air tube (polyurethane tube) to be connected to the filter regulator of the Rejector.
*3 Max. height of screened products is dependent on the shape of the conveyor downstream of the Conveyor Drop type Rejector.
*4 AD-4982-2035 can be attached without Base AD-4982-11-79, when connecting with AD-4961A-2KD2035 or AD-4961A-6K2035.
*5 AD-4984-1246 can be attached without Base AD-4982-11-79, when connecting with AD-4961A-6001224.
*6 AD-4984-2046 can be attached without Base AD-4982-11-79, when connecting with AD-4961A-2KD2035 or AD-4961A-6K2035.



Discover Precision

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