

Brightness Measuring Instrument TINT TESTER 527



testing equipment for quality management

ERICHSEN
since 1910

Technical Description

ASTM D 3265
ASTM D 2745

- **Non-contact Brightness Measurement**
- **Tinting Strength Determination**

Purpose and application

The **TINT TESTER 527**, has been developed especially for brightness measurement of dark, uncured coatings such as paste pigment applications on flat surfaces, to determine the tinting strength according to ASTM D 3265 and ASTM D 2745. Besides this special application, the instrument can also be used as a standard reflection photometer to measure the brightness of solid substrates (coatings, paper, plastics, etc.) according to ASTM E 97.

Design and function

The **TINT TESTER 527** consists of a stationary, mains driven power supply with supply and display unit (4 ½ digit LED) and the portable TINT SENSOR Y.

TINT SENSOR Y:

The TINT Sensor incorporates the 45°/0° worldwide standardized measuring geometry with light source C illumination. The spectral response of the light sensing photocell is corrected with an especially selected Y-filter so that the measuring values correspond with the brightness sensitivity of the CIE-2°-standard observer.

An adjusted and optimized lens system is part of the light transmitting and sensing optics to guarantee homogenous illumination of the specimen surface as well as a defined reception of the remitted light. Because of this, the results of measurement are highly reproducible, free of drift and according to specifications.

The opto-electronic system of the measuring head is insensitive against external disturbances due to the integrated pre-amplifier. It is possible to set the amplification within a wide range so that the measuring range of the instrument can be adjusted to the actual measuring problem to get optimum results.

Two transverse support ledges 8 mm wide and at a pitch of 80 mm integrated with the undersides of the measuring head, keep the measuring head away from the specimen so that measurements on coatings in the form of pastes are possible: the ledges prevent damage to the specimen and contamination of the measuring head. The gap between the measuring head and the specimen is 0.5 mm. It is thus possible to measure tint strength of freshly applied coatings with a wet film thickness of approx. 400 µm whilst extraneous light is totally excluded.

Technical Data

Power Supply and Display Unit

Dimensions (L x W x H):	275 x 235 x 110 mm
Net weight:	3.7 kg
Power Supply:	230 V ~, 50 Hz (other voltages upon request)
Capacity:	45 VA
Display:	4½ digit LED display (range 0 - 199.99 units)

TINT SENSOR Y

Dimensions (L x W x H):	175 x 55 x 95 mm
Net weight:	840 g
Measuring aperture:	Ø 23 mm
Light Source:	6 V - halogen lamp with special filter for light type C
Light Sensor:	Si photocell with special filter for matching the spectral curve of brightness sensitivity (Y value) of CIE-2°-standard observer

Ordering information	
Order No.	Product Name
01460131	Brightness Measuring Instrument TINT TESTER 527
Scope of delivery includes:	
<ul style="list-style-type: none"> ◆ Supply unit with LED display ◆ TINT SENSOR Y measuring head with 45/0° geometry, Y filter and 1.5 m connecting cable to the display unit. ◆ Black standard for zero setting ◆ Spare light bulb, spare fuses, mains connecting cable, screw driver and operating instructions 	

Important Note:

Please be informed, that the different interface solutions are to be chosen by choice, but not combinable by free choice in an arbitrary manner! It is neither common/meaningful, nor possible to combine all interfaces with each other. This is only for data export. Software for further data processing is not available.

Accessories	
Order No.	Product Name
03230132	RS232-C interface; Series interface for connecting to a PC, specially arranged for transferring measurements using simple programme (only for data export); by request optionally combinable with one (!) of the analogue outputs listed below (item no. 03240132 or 03250132 - please specify directly when ordering).
03240132	Analogue output (0 - 10 V); (optionally combinable with RS 232C interface (Art.-No. 03230132))
03250132	Analogue output (0 - 20 mA); (optionally combinable with RS 232C interface (Art.-No. 03230132))
01400114	White standard

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