

# 180-degree Peeling Tester IPTS-5N

- Enable accurate data Graphing with 2000Hz sampling rate with easy operation
- Handles a wide range of test speed up to 1500 mm/min
- Interlocking Shield is available as an optional equipment for safety



IPTS-5N



Test image

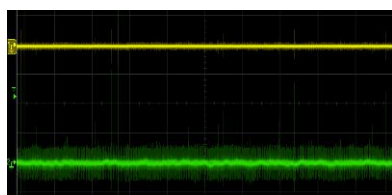
Features	
<b>Accurate graphing</b> It captures rapid force change due to its high sampling rate (2000Hz) for high repeatability.	<b>One-click operation</b> Simply press the START button to start the test. It peels the sample to the set stroke (peel length).
<b>Automatic recording</b> It can automatically record, graph and save data when testing.	<b>Visual analysis</b> It can overlay up to 5 graphs to allow easy comparison. It can automatically calculate Max/Min/Ave values of each graph.

## [Evolution to the Next Series]

Next Series is a generic term for IMADA measurement devices with upgraded functions and performances with the essential modifications. The devices enable to install additional functions from the user support site, IMADA-Connected. On the website, related data such as software and instruction manuals can also be downloaded. New Series: IPTS-5N Firmware Ver.5 or later.

### New Features

-Increased measurement stability achieved from further noise reduction of the measurement circuit.



Internal analog wave comparison  
Yellow: Next series/Green: Old Model

- Measurement device program (firmware) online updates available.
- Various software and additional functions downloadable to increase the measurement conveniences.



IMADA Connected  
(<https://www.imada-connected.com/>)

**[Related Standards]**

<p><b>IEC/JIS standards for peel test of embossed carrier tape</b></p>	<p><b>IEC 60286-3:2022</b> Packaging of components for automatic handling-Part 3: Packaging of surface mount components on continuous tapes. (Partly)  <b>JIS C0806-3:2021</b> Packaging of components for automatic handling-Part 3: Packaging of surface mount components on continuous tapes. (Partly)</p>
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**[Main functions]**

**[Test conditions]**

**- Peel length**

Max. 200mm

**- Load cell height adjustment**

Easily adjust the height of load cell by rotating the knob to suit the sample (up to 13mm).

**- Stroke limit knob**

Adjust stroke (peel length) easily by the limit knob.

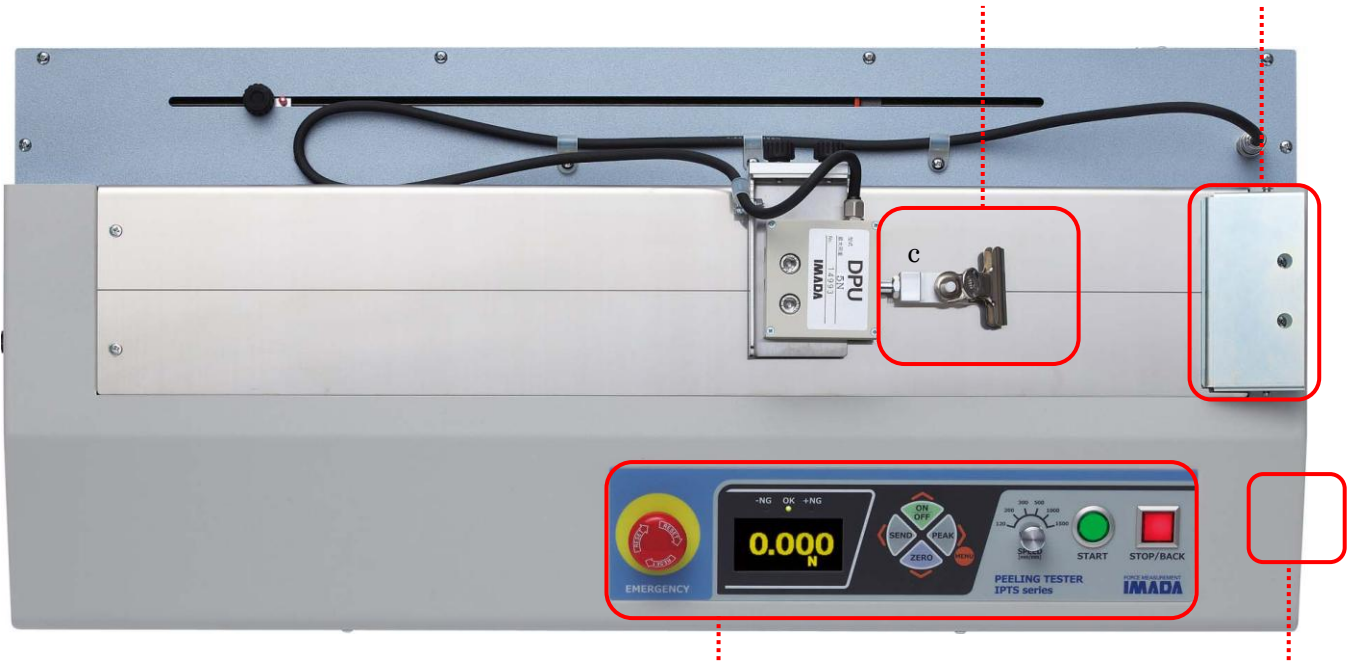
**[Sample fixing]**

**- Center line**

Attach the sample straight along with the center line and fix it with sample clip.

**- Easy gripping**

Grip the sample film with the film grip and hang the grip to the load cell.



**[Controls]**

**- Organic EL display**

Clear organic display provides excellent readability.

**- Simple operation**

Simply press start button to start the test. It enables automatic graphing by software.

**- A wide range of test speed**





120, 200, 300, 500, 1000, 1500mm/min (Switchable by a knob)

**[Output]**

**- USB connector**

Connect it to a PC using a supplied USB cable.



Procedure of Test			
Attach a sample	Set test speed and stroke	Grip film	Start test
Attach a sample straight along with the center line.	Select test speed with SPEED dial and set stroke (peel length) by limit knob.	Grip the peeled covering tape film with the film clip.	Press START button to start test. Meanwhile it starts automatic recording.
			

[Main functions of supplied software]

[Basic operation]

- Save graphs automatically

It enables automatic graphing and data saving by using trigger function.

- Switch graphs with plural tabs

The recorded graphs can be displayed in plural tabs.

- Add notes

Notes can be inserted at desired points on the graph.

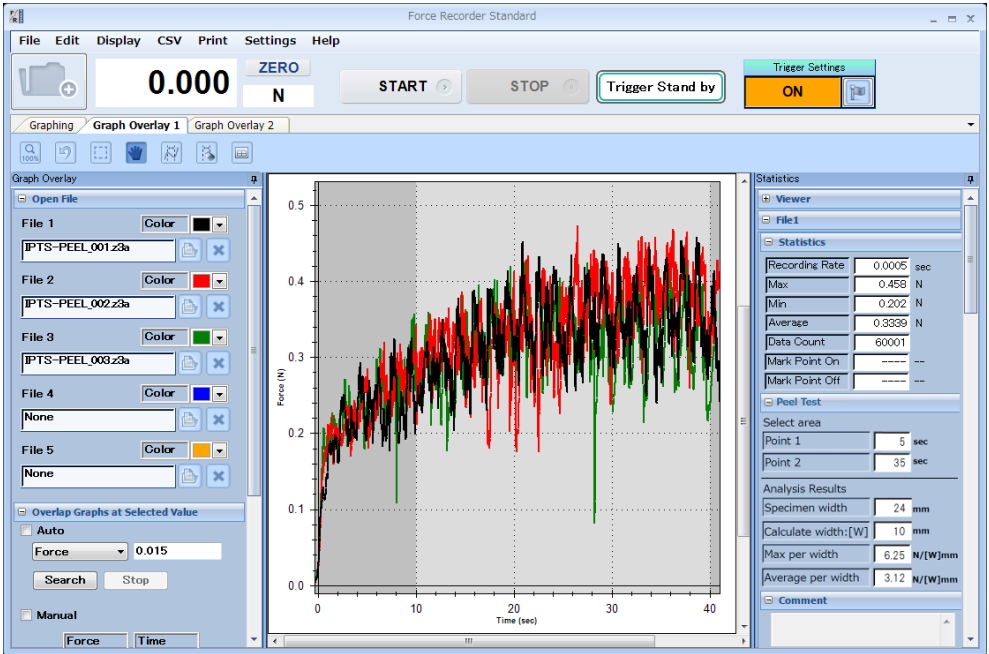
[Advanced operation]

- Overlay graphs

Max. 5 graphs can be overlaid. It can be printed and output in desired format.

- Zoom graph

Simply click and drag to specify an area to zoom-in. The Max, Min, and Ave. values of the selected area are displayed. It allows you to print or output in desired format.



[Others]

- Statistics display

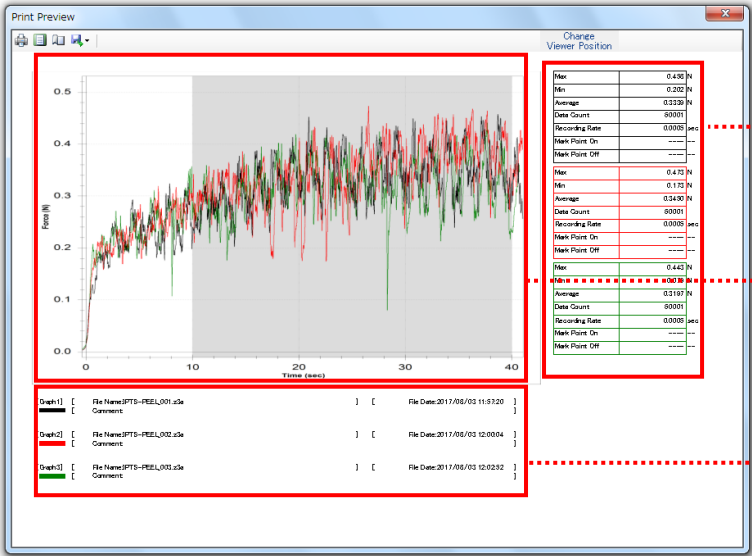
The Max, Min, and Ave. values can be displayed. When the specimen width and calculate width are input, the Max and Ave per width can be calculated and shown as N/(width)mm.

Peel Test	
Select area	
Point 1	5 sec
Point 2	35 sec
Analysis Results	
Specimen width	24 mm
Calculate width: [W]	10 mm
Max per width	6.25 N/[W]mm
Average per width	3.12 N/[W]mm

- Input comment

Notes such as testing conditions up to 198 characters can be input.

[Output sample image]



Statistics

Graph data

File name, folder, and comments

[Output]

- Printing

It prints out in A4 or letter size.

- Digital output


The data can be output in Word, Excel, and PDF format. Graph is attached as an image file.

Specifications	
Model	IPTS-5N
Capacity	5N
Resolution	0.001N
Accuracy	+/-0.2%F.S. +/-1digit
Overload	Approx.150% F.S (It warns with buzzer and light flashing when the force is over 110% of capacity.)
Sampling rate	Max.2000 data / sec (2000Hz)
Test speed	120, 200, 300, 500, 1000, 1500mm/min (Switchable)
Stroke (length)	Travel of load cell: Approx. 400mm (Peel length: Approx.200mm)
Peel angle	165°-180° (Height and angle are adjustable.)
Max. sample width	Adhesion: 88mm (Film clip: 40mm, Sample clip: 95mm)
Max. sample thickness	Cover film: 0.5mm
Safety device	Emergency stop button, Overload stop function (Valid with the power ON) *1
Power	AC100 to 240V free input *2
Weight	Approx. 11kg
Operating environment	Temperature: 0 to 40°C Humidity: 20 to 80%RH
Accessories	Force Recorder Standard (graphing software), USB cable, Power cable, Film clip, Inspection certificate, Instruction manual

\*1 The Overload stop function does not guarantee complete protection against overload.

\*2 Please specify the voltage when you order. (Accessory varies depending on voltage.)

#### [Option Model (-IC) with Interlocking Shield]

Model	Code	Description	Image
Interlocking Shield Model	-IC *1	The transparent polycarbonate interlock shield prevents the testers from contacting samples during measurements. The operation automatically stops when the cover opens.	


- Interlocking shield is a factory-installed option. In the case you would like to install the shield to your owned IPTS, please contact the local distributor or us for details.

\*1 Please add the code (-IC) to the standard model code end (IPTS-5N-IC) when you order this option model.

Specifications of the included software	
Data transferring speed	Max. 2000 data / sec (2000Hz)
Recording data point	Max. 7.2 million
Graph	Graph overlaying function, Capture function, Graph scaling, Statistics output, Point marking
Graph recording	Trigger function
Edit	Comment, Add notes, Borderline function
Output	Printing (A4, letter size), CSV, Word, Excel, PDF
OS	Windows 8.1/10/11
Hardware	CPU: 1GHz or more recommended, Memory: 2GB or more recommended Hard disk: 10GB (Data storage area) or more
Platform	NET Framework 4.8 or later
Image size	Resolution 1024×768 pixel or more

\* Some old versions of Excel show data up to 65,531 only.

## [Downloadable Graphing Software Option]

Downloadable Force-Time Graphing Software	
<b>-NEXT</b>	With this option, Downloadable Graphing Software Force Recorder Next Standard is included instead of CD version Graphing Software Force Recorder Standard. *1 Please add the code to the end of model. Example: IPTS-20N-NEXT
 <p>Force Recorder Next Standard</p>	<ul style="list-style-type: none"> <li>- High-speed communication of up to 2000 times/second achieves high accuracy load-time graphs.</li> <li>- The measurement results recorded and analyzed efficiently with an enforced range of preset functions.</li> <li>- Data analysis functions for various graph editing, such as up to 10 graph overlays with the reference graph.</li> <li>- Notes and images input for additional measurement information.</li> <li>- Graph images and statistics output in various file formats (PDF, Word, Excel) for easy report creation.</li> </ul> <p>*The conversion function for peel force units (N/10mm, etc.) is unavailable. Please download the chargeable additional function "Peel Testing Module 1" for the peel force unit conversion function.</p>

\*1 When -NEXT option is applied, the dedicated download card providing the redemption code is included.

To use the software, downloading the software from IMADA Connected is required.

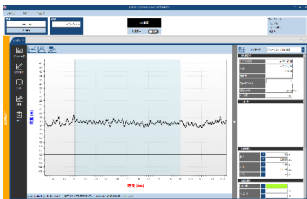
\* To download Force Recorder Next Standard, user & product registration on IMADA Connected is required.

\* An Internet connection is required in process of user & product registration and downloading the software.

\* Some specification such as operating environment is different from the CD version.

Please refer to the specification sheet of the Force Recorder Next series for details.




## The Additional Function Introduction to the Force Recorder Next Series

 <table border="1" data-bbox="454 1198 703 1413"> <thead> <tr> <th colspan="2">Standard Conform</th> </tr> </thead> <tbody> <tr> <td colspan="2">Standard Conform</td> </tr> <tr> <th colspan="2">Peel Force Values</th> </tr> <tr> <td colspan="2">OK</td> </tr> <tr> <td>Sample Width</td> <td>24.00 mm</td> </tr> <tr> <td>Peel Max</td> <td>0.49 N/10mm</td> </tr> <tr> <td>Peel Min</td> <td>0.38 N/10mm</td> </tr> <tr> <td>Peel Ave</td> <td>0.436 N/10mm</td> </tr> </tbody> </table>	Standard Conform		Standard Conform		Peel Force Values		OK		Sample Width	24.00 mm	Peel Max	0.49 N/10mm	Peel Min	0.38 N/10mm	Peel Ave	0.436 N/10mm	<p>[Peel Testing Module 1] Automatically converts measured force values into peel force units. Also it supports measurement compliance with industry standards.</p> <ul style="list-style-type: none"> <li>- By setting the sample width, etc., the measurement results' statistical values are automatically converted into peel force units (N/10mm, etc.) and displayed when the test is completed.</li> <li>- The preset function supports easy test condition setting complying with the industry standards. Test conditions designed by users can be registered and saved to recall the setting conditions. (Regarding the preset industry standard lineups, please contact us for details)</li> </ul>
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- After installing the Force Recorder Next series, additional function downloads are available from IMADA Connected.



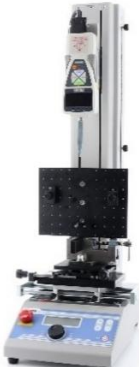

- For "Peel Test Optimization Function", purchase Download Card Advanced in advance.

## [Related Products]

180-degree peel test fixture <b>P180-200N</b>	Rubber roller for peel test <b>APR-97 series</b>	Film cutter <b>FSC-1525</b>
Ideal for 180-degree peel testing for adhesive tape.	Designed to bond a sample at a regular pressure in peel test. (Complies with the corresponding part of the standard, ISO 29862:2007)	Designed to cut film and paper at stable width. (Complies with the corresponding part of the standard, JIS Z1707:2019, JIS Z0238:1998, and ATSM F88)
		



**[Related Test]**

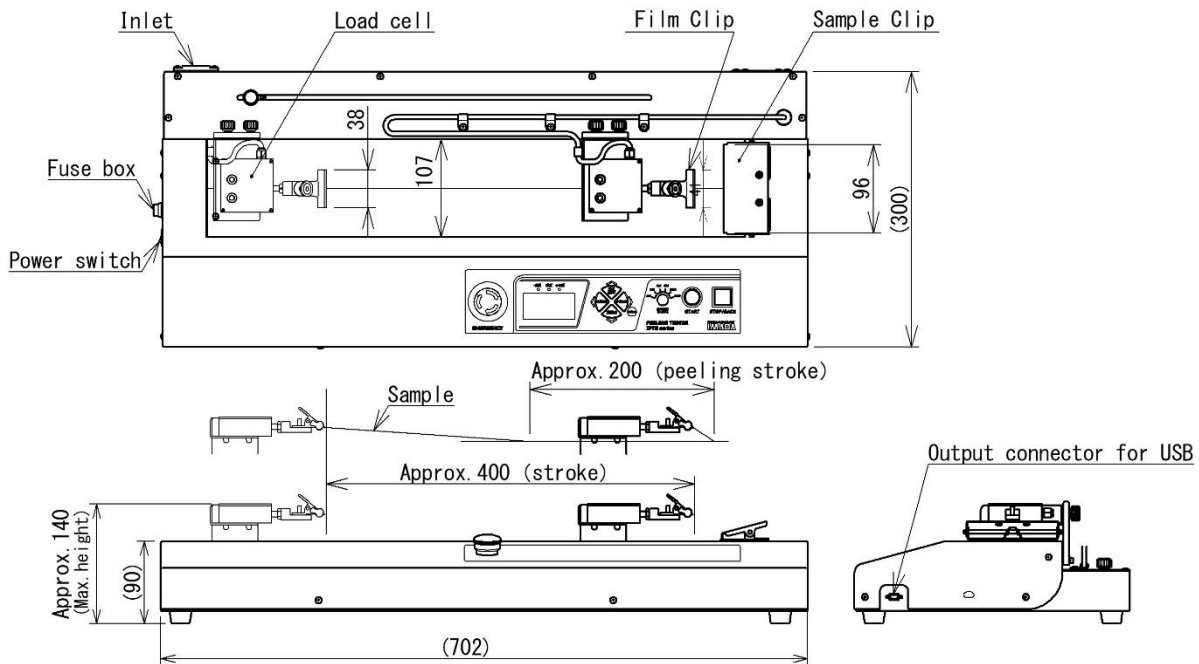
<p>Breaking tensile strength test of cover tape's film to check whether it meets the requirement of IEC 60286-3(2022) and JIS C0806-3(2021)</p>	<p>Pull strength test of solder joints complying with the corresponding part of IEC 62137-1-1 (JIS C 62137-1-1)</p>
	
<p><b>Example1</b>                      <b>Code: 1G2005A</b></p> <p>Digital force gauge: ZTS-200N Motorized test stand: MX2-500N-L Optional attachment: GC-60 (2 pieces) Optional cable: CB-528</p>	<p><b>Example1</b>                      <b>Code: 1S2008A</b></p> <p>Digital force gauge: ZTS-100N Motorized test stand: EMX-500N-L Optional attachment: SJ-QFP-01 Optional attachment: SJS-100N-L Optional cable: CB-528 Optional software: Force Recorder Standard</p>
<p>Shear strength test of solder joints complying with the corresponding part of JIS Z 3198-7</p>	<p>Shear strength test of solder joints complying with the corresponding part of IEC 62137-1-2 (JIS C 62137-1-2)</p>
	
<p><b>Example1</b>                      <b>Code: 1S2009A</b></p> <p>Digital force gauge: ZTS-100N Motorized test stand: MX2-500N-L-V90 Optional attachment: SJ-TIP-02 Optional attachment: SJS-100N-L Optional cable: CB-528 Optional software: Force Recorder Standard</p>	<p><b>Example1</b>                      <b>Code: 1S2010A</b></p> <p>Digital force gauge: ZTS-100N Motorized test stand: EMX-500N Optional attachment: SJ-TIP-03 Optional attachment: SJS-100N-S Optional cable: CB-528 Optional software: Force Recorder Standard</p>

\* Refer to the specification of each product for details.

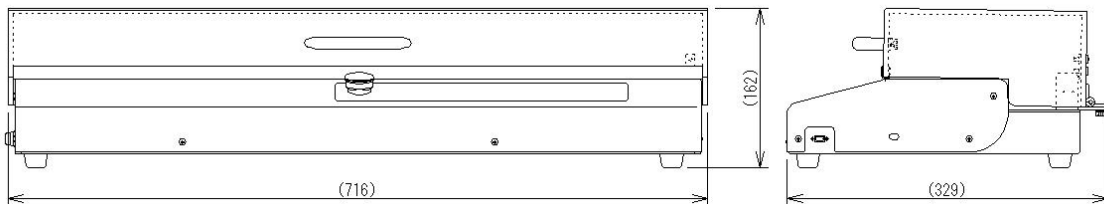
\* Product configuration varies depending on the shape and characteristic of the sample, and measurement conditions.

\* The recommended capacity of force gauge varies depending on the expected force to be loaded.

## [IPTS-5N Dimensions]



### Interlocking shield (-IC option)



Unit: mm

## [ISO Calibration Service and Calibration Certificate]

- We are the accredited ISO/IEC 17025:2017 Calibration Organization with the in-house Calibration Service facility.
- The Calibration Service and Issuing of the Calibration Certificates and Traceability Chart available at extra cost.
- For further information, please kindly contact the local authorized distributor or us.

## [Caution]

- Information in this document is subject to change without prior notice.
- This product is designed for force measurement purposes only.
- Do not copy and use this content without authorization.
- Do not apply force more than its capacity and from incorrect direction to the measuring shaft.
- Some samples are not suitable due to the materials of the sample and measuring conditions.

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