

# LABOMED

# Prof. Syngcuk Kim



You can only treat what you can see!

## Why Enhanced Vision Is Necessary In Dentistry

- Resolving power of the unaided human eye is only .2 mm
- Restorative dentists, periodontists, and endodontists routinely perform procedures requiring resolution well beyond the .2 mm limit of human sight
- Crown margins, scaling procedures, incisions, root canal location, caries removal, furcation and perforation repair, post placement or removal, and bone-and soft-tissue grafting procedures are only a few of the procedures that demand tolerances well beyond the .2 mm limit

## Advantages of Dental Operating Microscope

- Increased Visualization
- Improved Quality and precision of treatment
- Improved & Ideal treatment Ergonomics
- Ease of Proper Digital Documentation Capabilities
- Increased Ability to Communicate through Integrated Video

# Difference Between Loupe & Microscope

## Magnification loupe

- Low depth of view
- Focus using the neck
- The image can only be seen by the dentist who has the loupe on
- No reproduction or storage of images or videos
- Insufficient light (most of the time with shadow)
- Field of view limited and small
- Working material standard
- Working movements big
- Heavy load on the muscular system : head and shoulders
- Light cable is guided over the head and neck

## Microscope

- Infinity image (no need to adapt)
- Variable magnification (from magnification 4x until 25x)
- Optimum depth of view
- Manual focus with micrometric knob
- Others can also see the image of the microscope
- Reproduction and storage of the images (photo & video)
- Co-axial light (working field optimal light)
- Working field bigger and illuminated
- Working material small
- Working movements small
- Ergonomics position



# LABOMED

- Leading Microscope Manufacture in world.
- 60 Years old Company.
- Head office in Fremont California
- Optics from SCHOTT Germany
- Rubber and Silicon knob from Italy
- Plastic Material from Italy
- Di-casting Aluminium from Taiwan
- Electrical items import from USA
- LED 50 W single chip LED from Germany
- Castors, Antistatic wheel from Germany
- Export to all over the world.
- FDA approved product.
- No.1 Company in Asia.

## **LABOMED Product Features**

Apo chromatic Optical system Produce sharpness and resolution better.

0-210 ° inclinable ergo observation head.

Eye Piece WF 10X/18 mm with eye guards, Optional: WF 12.5X/18 mm

Super Bright LED produce Cool field of illumination.

With color temperature range near to daylight.

Maxlite- Anti Reflective and Anti scratch property of optics.

Different filters availability for better illumination.

Perfect viewing in all quadrants.

Six Articulation

Certificate of Compliance**Manufacturer:**

Labotech Microscopes India Pvt., Ltd.

This is to certify that the technical documentation for the product:

**Product Name:**

Surgical microscope for Ophthalmic applications, ENT application, Dentistry and Dentistry education

**Model No/Type:** PRIMA OPH, PRIMA ENT, PRIMA DNT, PRIMA DNT TRAINER, PRIMA GN**Technical File No:** TF-02**Product description:**

LABOMED prima surgical microscope (models prima OPH, prima ENT, prima DNT, prima GN and Prima DNT trainer) used in the field of ophthalmology, ENT, dentistry and gynecology is an AC-powered device. The intended use of surgical microscope is exclusively for magnifying the visual field giving the user an excellent level of comfort and improves visual acuity during surgery.

**Complies with the requirements applicable to it**

The manufacturer's technical documentation, as required for Class I devices, has been assessed as meeting the Essential Requirements and relevant provisions of the Directive 93/42/EEC, as amended by 2007/47/EC, on Medical Devices for CE Marking.

**Certificate issued by:**

**ChanYo, Won**  
Regional Technical Director  
UL Health Sciences

**Certificate Number:** 13CA10790-1**Certificate expiry:** 2016-08-01

*Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this receipt invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 93/42/EEC.*

While all due care and skill was exercised in carrying out this assessment, UL Health Sciences accept responsibility only for proven gross negligence. This certificate is issued for the date that the technical documentation was reviewed. Conformance to all regulatory requirements is the sole responsibility of the manufacturer including the manufacture and quality control of the products. This is not legal document and cannot be used as such. This certificate remains the property of UL Health Sciences to whom it must be returned on request.



# IEC 60601 Certification

		Ref. Certif. No. <b>DK-33561-UL</b>
IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC		
<b>CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC</b>		
Product Produit	Surgical Microscopes	
Name and address of the applicant Nom et adresse du demandeur	LABOTECH MICROSCOPES INDIA PRIVATE LTD 19 HSIDC INDUSTRIAL AREA AMBALA CANTT HR 133006 INDIA	
Name and address of the manufacturer Nom et adresse du fabricant	LABO AMERICA INC 920, AUBURN COURT FREMONT, CA 94538, USA	
Name and address of the factory Nom et adresse de l'usine	LABOTECH MICROSCOPES INDIA PRIVATE LTD 19 HSIDC INDUSTRIAL ARE AAMBALA CANTT HR 133006 INDIA <input type="checkbox"/> Additional Information on page 2	
Note: When more than one factory, please report on page 2 Note: Lorsque il y a plus d'une usine, veuillez utiliser la 2 <sup>ème</sup> page		
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	100-240V~; 50/60 Hz; 130W	
Trademark (if any) Marque de fabrique (si elle existe)		
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	TMP	
Model / Type Ref. Ref. De type	Prima DNT Trainer, Prima DNT, Prima ENT, Prima OPH	
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2 <sup>ème</sup> page	National Differences specified in the CB Test Report. <input type="checkbox"/> Additional Information on page 2	
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60601-1(ed.3)	
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	E303857-A6-CB-1 issued on 2013-07-01	
This CB Test Certificate is issued by the National Certification Body Ce Certificat d'essai OC est établi par l'Organisme National de Certification		
	<input type="checkbox"/> UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA <input checked="" type="checkbox"/> UL (Denmark), Borupvang 5A DK-2750 Ballerup, DENMARK <input type="checkbox"/> UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN <input type="checkbox"/> UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA	
Date: 2013-07-01	Signature:  Jan-Erik Storgaard	
For full legal entity names see www.ul.com/incbnames		



## CERTIFICATE OF REGISTRATION

### Labotech Microscopes India Private Ltd

19, HSIDC Industrial Area,  
Ambala Cantt, Haryana -- 133006 India

UL LLC® (UL) issues this certificate to the Firm named above, after assessing the Firm's quality system and finding it in compliance with

### ISO 9001:2008

EN ISO 9001:2008\*, ANSI/ISO/ASQ Q9001-2008\*, CAN/CSA-ISO 9001-08\*

The contract manufacture of stereo microscopes, refractometers, polarizing kits and auxiliary objectives.

File Number A16372  
Certificate No. 10082041.PDSX

Effective Date March 15, 2014  
Expiry Date March 14, 2017



Authorized by

*Deborah Jennings-Conner*

**Deborah Jennings-Conner**  
Director – Global Health Sciences Operations  
UL Life and Health Sciences  
UL LLC



This quality system registration is included in UL's Directory of Registered Firms and applies to the provision of goods and/or services as specified in the scope of registration from the address(es) shown above. By issuance of this certificate the firm represents that it will maintain its registration in accordance with the applicable requirements. This certificate is not transferable and remains the property of UL LLC.

Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2008 requirements may be obtained by consulting the organization. \*Denotes equivalent standards that are not included on UL's scope of accreditations.



UL LLC  
333 Pfingsten Road  
Northbrook, IL 60062-2096 USA

# ISO 13485:2003 Certification



## CERTIFICATE OF REGISTRATION

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### ISO 13485:2003 / Cor 1:2009

EN ISO 13485:2012\*, CAN/CSA ISO 13485-03 (R2008)\* and ANSI/AAMI/ISO 13485:2003 (R2009)\*

The contract manufacture of surgical microscopes, slit lamps, beam splitters and assistant viewing attachment.

File Number A16372  
Certificate No. 10082041.PDWS

Effective Date March 15, 2014  
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### reddot design award winner 2013

The award "Red Dot" for high design quality, expressing innovation in form and function in an exemplary manner, is presented to:  
Die Auszeichnung „Red Dot“ für hohe Designqualität, die in beispielhafter Weise Innovation in Form und Funktion ausdrückt, wird verliehen an:

eVO 500D  
Slit Lamp  
Spaltlampe

**Manufacturer**  
Labo America,  
Fremont, USA  
**In-house design**  
Neeraj Jain

Essen, 1 July 2013

  
Prof. Carlos Hinrichsen  
Santiago, Chile

  
Wolfgang K. Meyer-Hayoz  
Winterthur, Switzerland

  
Prof. Dr. Alpay Er  
Istanbul, Turkey

  
Prof. Dr. Peter Zec  
Initiator & CEO Red Dot Design Award  
Essen, Germany



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eVA 500D  
Colposcope  
Kolposkop

**Manufacturer**  
Labo America,  
Fremont, USA  
**In-house design**  
Neeraj Jain

  
Prof. Carlos Hinrichsen  
Santiago, Chile

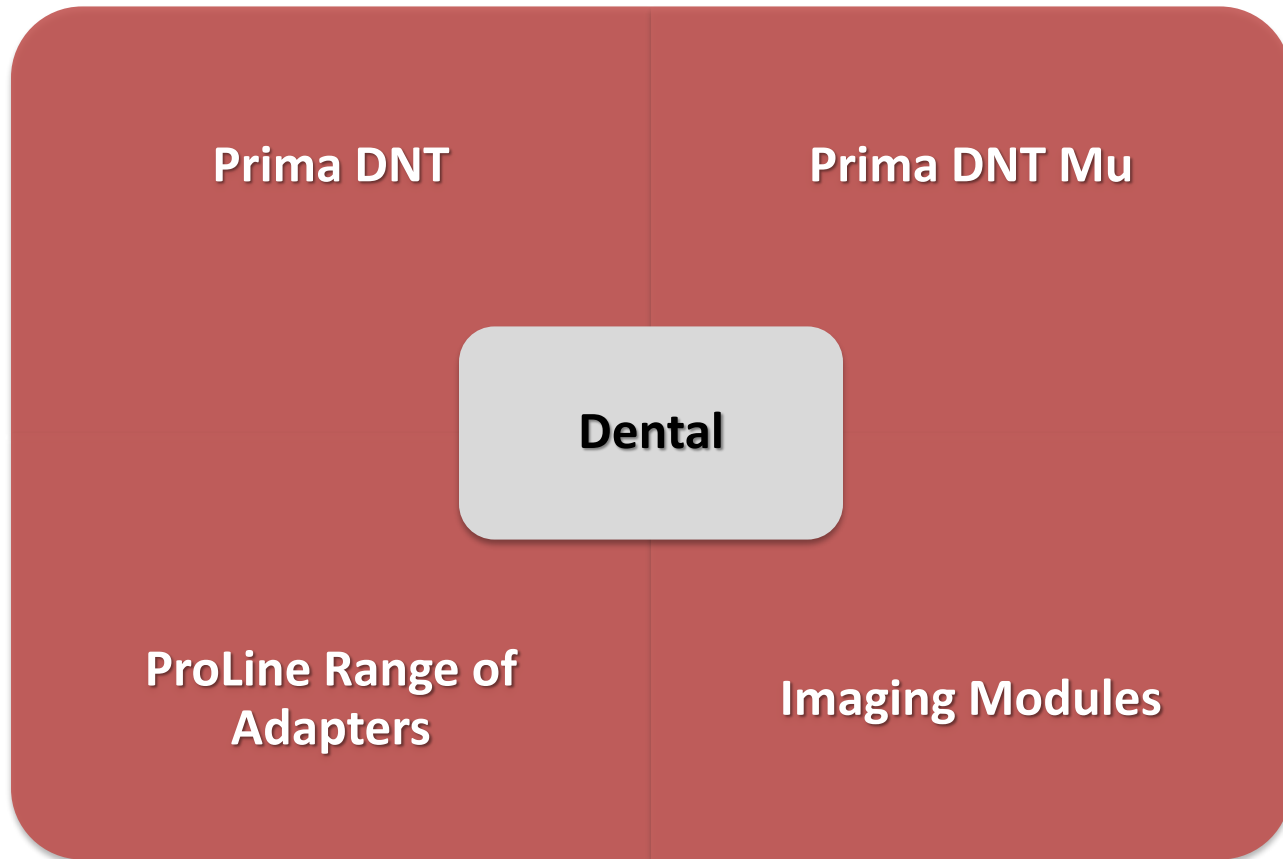
  
Wolfgang K. Meyer-Hayoz  
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Prof. Dr. Alpay Er  
Istanbul, Turkey

  
Prof. Dr. Peter Zec  
Initiator & CEO Red Dot Design Award  
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## **LABOMED Product Features**

- Adjustable Handles.
- Microscope Head Provides vibrating free view.
- Adjustable inter-pupillary Distance
- Diopter lock System.
- Magni Changer 6X to 16X available.
- Long working distance option available CMo – f/250 or nuVarTM f/300 to 400.
- Optional accessories
  - Beamsplitter straight/inclined
  - Rotoplate and/or Extender
  - ProLine range of camera adapters
  - iVu S5 5MP integrated digital camera module with on-device capture button



# Prima Mu

## Specifications



- Floor, Wall, Table and ceiling mountings
- 0-210 degree ergonomic binocular tube;  $f=170\text{mm}$  focal length
- 3 step apo-chromatic objective 0.6x, 1.0x, 1.6x. Object field range from 7mm to 118mm
- Wide field focusable eyepieces 10x, 16mm FOV
- $f=250\text{mm}$  working distance.
- Cold light fibre optic illumination
- **27 Watt LED illumination**

# Prima DNT

## Specifications



- Floor, Wall, Table and ceiling mountings
- 0-210 degree ergonomic binocular tube;  $f=170\text{mm}$  focal length
- 5 step apo-chromatic objective 0.4x, 0.6x, 1.0x, 1.6x and 2.5x . Object field range from 7mm to 118mm
- Wide field focusable eyepieces 10x, 16mm FOV
- $f=250\text{mm}$  working distance. NuVar system from 300-400mm focal length adjustment
- Cold light fibre optic illumination
- **50 Watt LED illumination**



# Prima Magna



- The Magna is a dental operating microscope
- Mounting options include wall, ceiling, table and floor
- Continuous Zoom from 4x to 25x
- Auto Balancing Arm (ABA) with electromagnetic clutch
- Motorized Fluorescent Filter attachment.
- High-fidelity apochromatic optics
- Ultra-bright, cool LED light source
- Comes standard with NuVar, DBSi, Rotoplate, Dual Iris Diaphragm, and a video adapter of your choosing

Floor Stand

Wall Mount

**Mounting  
Options**

Ceiling Mount

## Prima Mounting Options



**Floor Stand**

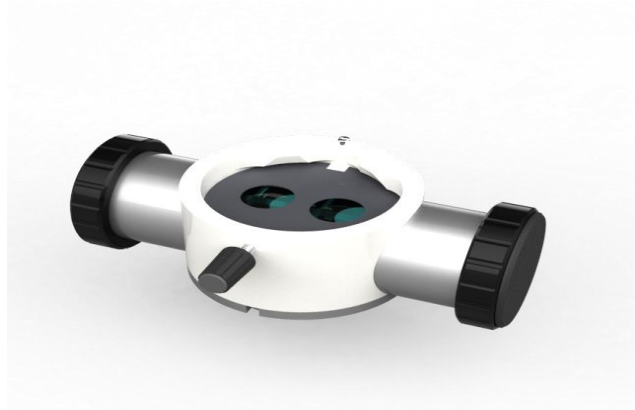


**Ceiling Mount**



**Wall Mount**

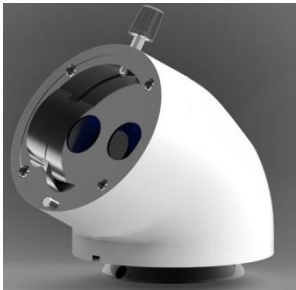
# ProLINE range of Adapters



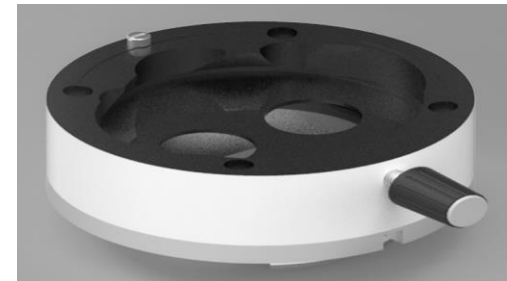
**DBS**



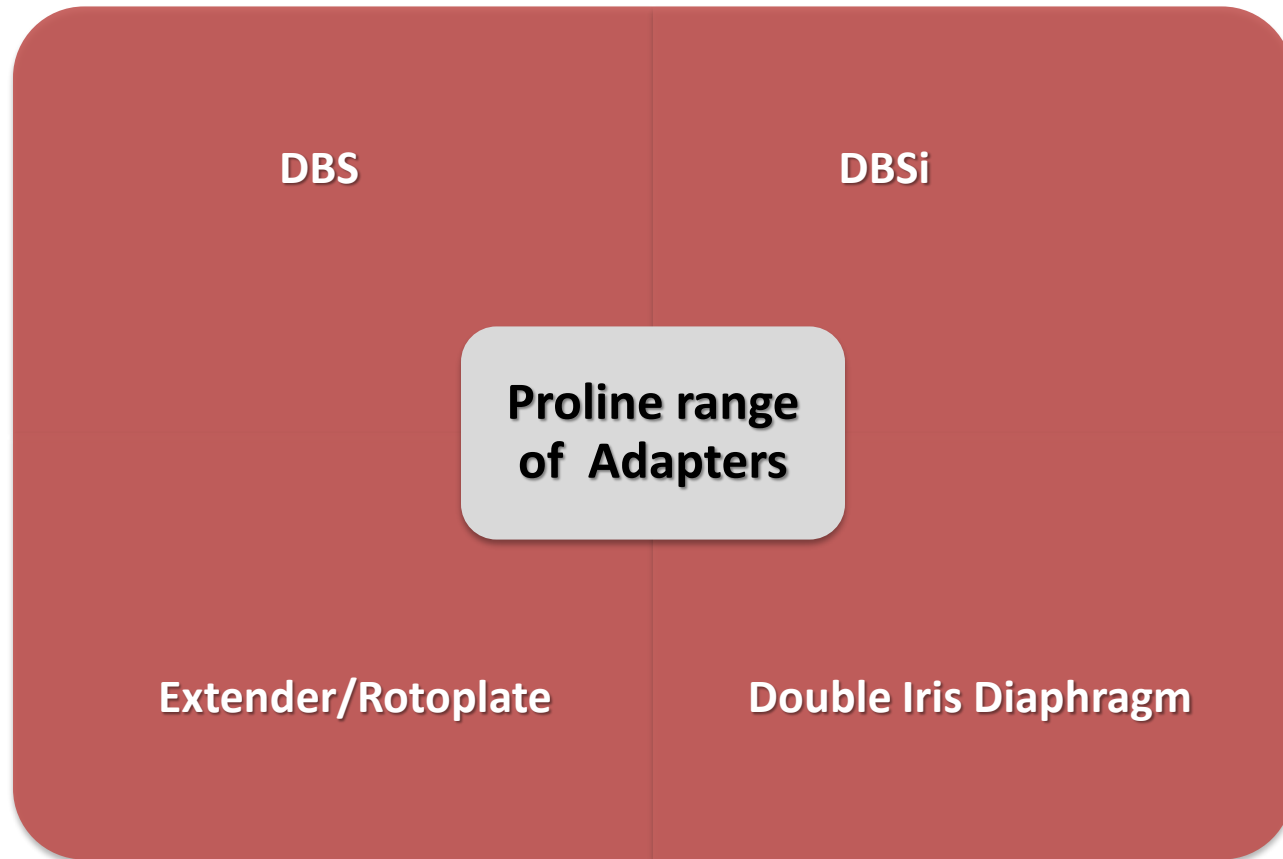
**DBSi**



**Extender**



**Rotoplate**



## ProLINE range of Adapters



**Double Iris Diaphragm**



**DSLR / Handy cam Adapter**



**Attached handy cam /  
DSLR Adapter with DBSi**



**Assistoscope**

# Thank you!

