

Title (en)  
INTRASTROMAL PHOTO-REFRACTIVE KERATECTOMY

Title (de)  
FOTO-REFRAKTIVE, INTRASTROMALE KERATEKTOMIE

Title (fr)  
KERATOTOMIE PAR PHOTO-REFRACTION INTRASTROMALE

Publication  
**EP 0850089 A1 19980701 (EN)**

Application  
**EP 96928030 A 19960730**

Priority  
• CA 2226949 A 19980216  
• US 9612556 W 19960730  
• US 51658195 A 19950817

Abstract (en)  
[origin: WO9706856A1] A method for performing intrastromal photo-refractive keratectomy in the cornea (12) of an eye using a pulsed laser beam, includes the initial step of focusing the beam to a focal spot at a selected starting point in the stroma (22). The starting point is located at a predetermined distance behind the epithelium (18) of the cornea. While focused on the starting point, the laser beam is pulsed to disrupt a volume of stromal tissue (36) which is substantially equal to the volume of the focal spot. Subsequently, the beam is focused in a patterned sequence to focal spots at other discrete points in the stroma. At each point the stromal tissue is photo-disrupted. With this progressive pattern of photo-disruption, each spot is placed substantially adjacent a volume of previously disrupted tissue. The resultant photo-disrupted tissue creates a layer which is substantially centro-symmetrical around the optical axis. A plurality of layers can be removed to create a cavity in the stroma. When the cavity collapses, the corneal curvature is changed as desired.

IPC 1-7  
**A61N 5/02**

IPC 8 full level  
**A61B 18/20** (2006.01); **A61F 9/007** (2006.01); **A61F 9/01** (2006.01)

CPC (source: EP)  
**A61F 9/008** (2013.01); **A61F 9/00827** (2013.01); **A61F 2009/00872** (2013.01); **A61F 2009/00897** (2013.01)

Designated contracting state (EPC)  
DE FR GB

DOCDB simple family (publication)  
**WO 9706856 A1 19970227**; CA 2226949 A1 19990816; CA 2226949 C 20090505; EP 0850089 A1 19980701; EP 0850089 A4 20000412; JP H11511051 A 19990928

DOCDB simple family (application)  
**US 9612556 W 19960730**; CA 2226949 A 19980216; EP 96928030 A 19960730; JP 50931097 A 19960730