

Title (en)
IMPROVED CALCULATION OF OPHTHALMOLOGICAL LENSES

Title (de)
VERBESSERTE BERECHNUNG OPHTHALMISCHER LINSEN

Title (fr)
CALCUL AMÉLIORÉ DE LENTILLES OPHTALMIQUES

Publication
EP 4193217 A1 20230614 (DE)

Application
EP 21755448 A 20210804

Priority
• DE 102020004840 A 20200807
• EP 2021071710 W 20210804

Abstract (en)
[origin: WO2022029150A1] The invention relates to a method for defining an area model for calculating at least one area of at least one ophthalmological lens at least from a set of order parameters for the lens and/or from variables depending on the order parameters. The method comprises: providing a training data set comprising a plurality of order parameter sets; providing at least one target value of at least one property of the at least one lens for each of the order parameter sets in the training data set; providing at least one area model parameterised by model parameters; defining optimised values for the model parameters of the area model using the provided target values, e.g. by optimising the values for the model parameters with the aim of minimising/maximising a target function, depending at least on the model parameters and on the provided target values, for the model parameters. The target function for the model parameters for each of the order parameter sets contains at least one term which assumes a minimum/maximum when the provided target value of the at least one property of the lens for the order parameter set coincides with the value of the same property of at least one lens which can be calculated with the area model with given values of the model parameters of the area model for the corresponding order parameter set. The invention also relates to a method for defining at least one area of an ophthalmological lens with the aid of an area model, a corresponding production method, and corresponding computer program products and devices.

IPC 8 full level
G02C 7/02 (2006.01)

CPC (source: EP US)
G02C 7/028 (2013.01 - EP US)

Citation (search report)
See references of WO 2022029150A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
DE 102020004840 A1 20220210; CL 2023000386 A1 20230929; CN 116194824 A 20230530; EP 4193217 A1 20230614; JP 2023537034 A 20230830; US 2023296918 A1 20230921; WO 2022029150 A1 20220210

DOCDB simple family (application)
DE 102020004840 A 20200807; CL 2023000386 A 20230206; CN 202180063368 A 20210804; EP 2021071710 W 20210804; EP 21755448 A 20210804; JP 2023508061 A 20210804; US 202118040943 A 20210804