

PACKAGE ID - 001133IB48600 BOT

KWIC TITLE - Binary Optics Toolkit

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LIMITATION CODE -COPY **AUDIENCE CODE** - LIM

COMPLETION DATE - 03/21/1996 **PUBLICATION DATE** - 03/21/1996

DESCRIPTION - This software is a set of tools for the design and analysis of binary optics. It consists of a series of stand-alone programs written in C and some scripts written in an application-specific language interpreted by a CAD program called DW2000. This software can be used to optimize the design and placement of a complex lens array from input to output and produce contours, mask designs, and data exported for diffractive optic analysis.

PACKAGE CONTENTS - Media Directory; Software Abstract; Media Includes Source Codes, User's Guide, executables, Sample Problem Input;

SOURCE CODE INCLUDED? - Yes

MEDIA QUANTITY - 1 3.5 Diskette

METHOD OF SOLUTION - This software uses an artificial intelligence algorithm to determine the best mapping from an input plane to an output plane consisting of a feedback neural network and a searching technique entitled Guided Evolution with Simulated Annealing (GESA). Common geometric and optical equations were used to generate the mask patterns and contours.

COMPUTER - IBM PC 486

OPERATING SYSTEMS - MSDOS with Windows 3.1 or Windows 95

PROGRAMMING LANGUAGES - C and DW2000 script language

SOFTWARE LIMITATIONS - The programs use dynamic memory allocation routines so the limitations will be in the amount of memory in the computer rather than in the software itself.

SOURCE CODE AVAILABLE (Y/N) - Y

UNIQUE FEATURES - These programs completely automate the design of binary optics.

RELATED SOFTWARE - The scripts require DW2000. The compiled C code will run alone.

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RELATED SOFTWARE - (CONT)

OTHER PROG/OPER SYS INFO - The following file extensions are typically used: LNS File containing lens data, DXF CAD file in the AutoCAD data exchange format, EPS Encapsulated PostScript, and GDS GDS II CAD file format.

HARDWARE REQS - IBM compatible 486 or better with 4 MB of RAM.

TIME REQUIREMENTS - This depends on the size and complexity of the lenslet being designed.

ABSTRACT STATUS - Submitted 12/4/96. Released AS-IS 12/23/96.

SUBJECT CLASS CODE - T

KEYWORDS -

COMPUTER PROGRAM DOCUMENTATION
B CODES
OPTICS
OPTICAL SYSTEMS
DESIGN
ALGORITHMS
NEURAL NETWORKS
DIFFRACTION

EDB SUBJECT CATEGORIES -

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SPONSOR - DOE/DP

PACKAGE TYPE - AS - IS