

Optical Storage (DVD Recorder/Player) System Solution

OPTICAL STORAGE SYSTEM SOLUTION

Device lineup

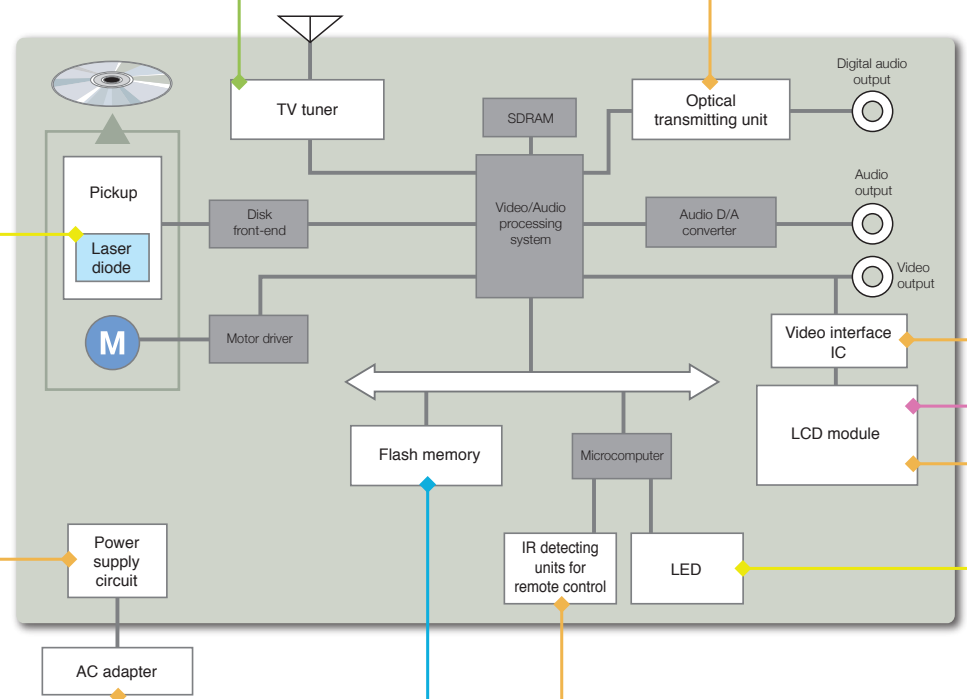
04/03

For receiving channel selection
 Combination front-end for digital terrestrial and digital satellite broadcast
VA1JF8011
 Combination front-end for digital terrestrial/ analog terrestrial/digital satellite broadcast
VA1R5JF8012

For DVD writing and DVD-ROM signal reading
 Red high power laser diode
GH16P24A8C/30A8C/35A8C
For CD signal reading
 Laser diode
GH17805B2AS
 Hologram laser
GH6CD05E3A

Low power-loss voltage regulator
PQ1Mxx5M2SPQ Series
PQ1MX55M2SPQ
PQxxxEZ02ZPH Series
CMOS chopper regulator (Bootstrap system)
PQ1CX41H2ZPQ
Compact chopper regulator
PQ1CN41H2ZxH Series

For isolation of high/low voltage side of power supply and transmission signals
 Photocoupler approved by safety standard
PC123 Series
PC3HU7 Series



For optic digital signal transmission
 Fiber optic transmitter (Optical fiber link)
GP1FAV51TK0F/GP1FAV55TK0F

For amorphous LCD
 Video interface IC (Output voltage 5 V)
IR3Y68M
IR3Y70M

For image display
TFT-LCD module
 These LCD modules are only made to order.

For LCD backlight
 LED driver
IR2E49U/M

For operation button illumination
 Chip LED
GM5ZV96260AE Series

For wireless operation of devices
 IR detecting unit for remote control
GP1UE2xxxKCx Series
 Holderless type IR detecting unit for remote control
GP1UXCxxQS

For program/data memory
 Page mode dual work flash memory
LH28FxxxBF Series (64 M/128 M)

Low power-loss voltage regulator

PQ1Mxx5M2SPQ Series PQ1MX55M2SPQ

- SOT-89 package (Output current: 500 mA)
- Variable output voltage type (PQ1MX55M2SPQ)
- Compatible with ceramic capacitors
- RoHS directive compliant



PQxxxEZ02ZPH Series

- Employs surface mount (SC-63 equivalent) package
- Low voltage operation (Minimum operating voltage: 2.35 V)
- Output current: 2.0 A
- Low dissipation current type
(Dissipation current with no load: MAX. 2 mA,
Dissipation current when OFF: MAX. 0.5 μ A)
- RoHS directive compliant



CMOS chopper regulator (Bootstrap system)

PQ1CX41H2ZPQ

- Chip employing CMOS process
- Surface mount (SOP 8-pin) package,
Outline dimensions: 5.0 (W) x 6.2 (D) x 1.5 (H) mm
- High efficiency (TYP. 90%)
- Switching current: MAX. 1.5 A
- High oscillation frequency (Oscillation frequency: TYP. 400 kHz)
- Compatible with ceramic capacitors
- Wide operating temperature range
(-40 to +105°C)
- RoHS directive compliant



Compact chopper regulator

PQ1CN41H2ZxH Series

- PWM system chopper regulator
- High-frequency oscillation type (Oscillation frequency: TYP. 300 kHz)
- With soft start function
- Enables output ON/OFF control
- Built-in overheat and overcurrent protection functions
- Wide operating temperature range
(-40 to +85°C)
- RoHS directive compliant



For isolation of high/low voltage side of power supply and transmission signals

Photocoupler approved by safety standard

PC123 Series

- European safety standards compliant
- Internal isolation thickness: 0.4 mm MIN.
- PC123J0000F Creepage distance: 6.4 mm MIN.
Clearance: 6.4 mm MIN.
- PC123FJ0000F Creepage distance: 8 mm MIN.
Clearance: 8 mm MIN.
- RoHS directive compliant



PC3HU7 Series

- Reinforced insulation type
- Internal isolation thickness: 0.4 mm MIN
- Lead interval: Half pitch
- Thin package:
Max. height 2.0 mm



For wireless operation of devices IR detecting unit for remote control

GP1UE2xxxKCx Series

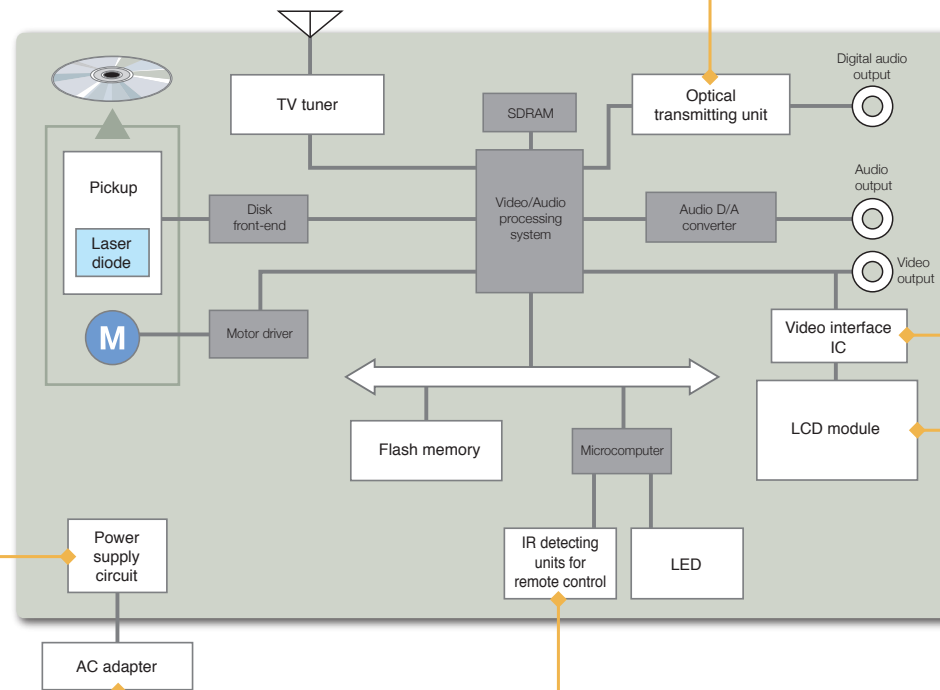
- CMOS output
- Output can be directly linked to a microcomputer
- Can be adapted to BPF frequencies suited to user needs
- Operating voltage: 2.7 to 5.5 V
- RoHS directive compliant



Holderless type IR detecting unit for remote control

GP1UXCxxQS

- CMOS output
- A Holderless form enables board mounting suited to the design of various set devices using a single model.
- Operating voltage: 2.7 to 5.5 V
- RoHS directive compliant



For optic digital signal transmission Fiber optic transmitter (Optical fiber link)

GP1FAV51TK0F/GP1FAV55TK0F

- EIAJ RC-5720B compliant square optical connector (Fiber optic transmitter for optical fiber link)
- With shutter mechanism
- TTL drive compatible
- High-speed signal transfer type
(Transfer rate: 13.2 Mb/s [NRZ] GP1FAV51TK0F)
(Transfer rate: 50 Mb/s [NRZ] GP1FAV55TK0F)
- POF (Plastic Optical Fiber) compatibility enables configuration of lightweight, inexpensive optical fiber links
- RoHS directive compliant



GP1FAV51TK0F
GP1FAV55TK0F

For amorphous LCD Video interface IC (Output voltage 5 V)

IR3Y68M

- For analog LCD panel
- Supports analog input (NTSC, PAL or SECAM/RGB/YUV)
- Built-in programmable timing controller
- Built-in on-screen display memory
- Supports both 4-wire serial and I²C
- Package: 100QFP (14 x 14 mm)

IR3Y70M

- Compatible with digital LCD panel (W-VGA)
- Supports analog input (NTSC, PAL or SECAM/RGB/YUV) and digital input (ITU656 or ITU601)
- Built-in EEPROM IF
- Package: 100QFP (14 x 14 mm)

For LCD backlight LED driver

IR2E49U/M

- Achieves high-efficiency by adjusting step-up voltage according to the LED load
- Equipped with five 150 mA* driver channels (Enables drive of 40 LEDs)
- Function for detecting open/non-connected status of output terminals
- Capable of external brightness adjustment using PWM input signals
- Built-in overcurrent/overvoltage/thermal shutdown/power supply voltage drop protection circuits
- Power supply voltage range: 6 to 28 V
- Packages: 36VQFN (IR2E49U)
48QFP (IR2E49M)

* Maximum current is determined by power dissipation.

Optical Storage (DVD Recorder/Player) System Solution

OPTICAL STORAGE SYSTEM SOLUTION

Page introducing RF devices, pickups, laser diodes, LEDs, LSIs and LCD modules

For receiving channel selection

Combination front-end for digital terrestrial and digital satellite broadcast

VA1JF8011

Combination front-end for digital terrestrial/ analog terrestrial/digital satellite broadcast

VA1R5JF8012

- Enables simultaneous reception of terrestrial digital and satellite digital broadcasts
- Helps reduce the mounting footprint

For DVD writing and DVD-ROM signal reading

Red high power laser diode

GH16P24A8C/30A8C/35A8C

- Compatible with 16x DVD writing (Pulse light output: MAX. 240/300/350 mW)
- 1.8 mm thick package



For CD signal reading

Laser diode

GH17805B2AS

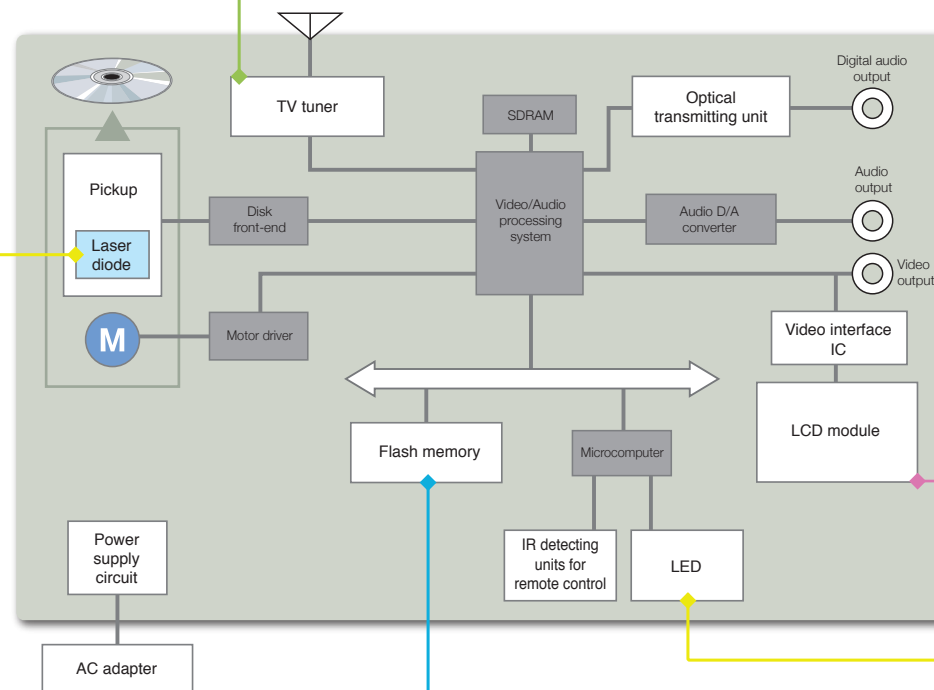
- Optical output: MAX. 5 mW
- Φ5.6 mm resin package



Hologram laser

GH6CD05E3A

- Optical output: MAX. 4.3 mW
- 4.8 mm thick resin package



For image display

TFT-LCD module

These LCD modules are only made to order.

For operation button illumination

Chip LED

GM5ZV96260AE Series

- High-luminosity type
- Outline dimensions: 3.2 (W) x 2.8 (D) x 1.9 (H) mm



For program/data memory

Page mode dual work flash memory

LH28FxxxBF Series (64 M/128 M)

- High-speed read (Vcc = 2.7 to 3.6 V)
- 70 ns/30 ns (page mode access time) (64 M)
- 75 ns/25 ns (page mode access time) (128 M)
- Data width: x 16 bit
- Boot block configuration: 4 Kwords x 8
- Dual work operable (between any 2 banks)
- Data protection function (block lock/lock down function, etc.)
- Packages: 48TSOP/48TFBGA (CSP) 8 (D) x 8 (W) mm (64 M) 56TSOP (128 M)