

The group  $G$  is isomorphic to the group labelled by [ 40, 12 ] in the Small Groups library.  
 Ordinary character table of  $G \cong C2 \times (C5 : C4)$ :

	$1a$	$5a$	$4a$	$2a$	$4b$	$2b$	$10a$	$4c$	$2c$	$4d$
$\chi_1$	1	1	1	1	1	1	1	1	1	1
$\chi_2$	1	1	$E(4)$	-1	$-E(4)$	1	1	$E(4)$	-1	$-E(4)$
$\chi_3$	1	1	-1	1	-1	1	1	-1	1	-1
$\chi_4$	1	1	$-E(4)$	-1	$E(4)$	1	1	$-E(4)$	-1	$E(4)$
$\chi_5$	4	-1	0	0	0	4	-1	0	0	0
$\chi_6$	1	1	1	1	1	-1	-1	-1	-1	-1
$\chi_7$	1	1	$E(4)$	-1	$-E(4)$	-1	-1	$-E(4)$	1	$E(4)$
$\chi_8$	1	1	-1	1	-1	-1	-1	1	-1	1
$\chi_9$	1	1	$-E(4)$	-1	$E(4)$	-1	-1	$E(4)$	1	$-E(4)$
$\chi_{10}$	4	-1	0	0	0	-4	1	0	0	0

Trivial source character table of  $G \cong C2 \times (C5 : C4)$  at  $p = 2$ :

Normalisers $N_i$	$N_1$	$N_2$	$N_3$	$N_4$	$N_5$	$N_6$	$N_7$	$N_8$
$p$ -subgroups of $G$ up to conjugacy in $G$	$P_1$	$P_2$	$P_3$	$P_4$	$P_5$	$P_6$	$P_7$	$P_8$
Representatives $n_j \in N_i$	$1a$	$5a$	$1a$	$1a$	$5a$	$1a$	$1a$	$1a$
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 1 \cdot \chi_9 + 0 \cdot \chi_{10}$	8	8	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10}$	8	-2	0	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	4	4	4	0	0	0	0	0
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	4	4	0	4	4	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	4	-1	0	4	-1	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 0 \cdot \chi_{10}$	4	4	0	0	0	4	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	2	2	2	2	2	2	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	2	2	2	0	0	0	2	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	2	2	2	0	0	0	0	2
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10}$	1	1	1	1	1	1	1	1

- $P_1 = Group([\{\}]) \cong 1$
- $P_2 = Group([(1, 4)(2, 7)(3, 9)(5, 35)(6, 13)(8, 38)(10, 39)(11, 28)(12, 27)(14, 40)(15, 32)(16, 31)(17, 34)(18, 33)(19, 20)(21, 37)(22, 36)(23, 24)(25, 26)(29, 30)]) \cong C2$
- $P_3 = Group([(1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40)]) \cong C2$
- $P_4 = Group([(1, 9)(2, 13)(3, 4)(5, 39)(6, 7)(8, 40)(10, 35)(11, 34)(12, 33)(14, 38)(15, 37)(16, 36)(17, 28)(18, 27)(19, 26)(20, 25)(21, 32)(22, 31)(23, 30)(24, 29)]) \cong C2$
- $P_5 = Group([(1, 4)(2, 7)(3, 9)(5, 35)(6, 13)(8, 38)(10, 39)(11, 28)(12, 27)(14, 40)(15, 32)(16, 31)(17, 34)(18, 33)(19, 20)(21, 37)(22, 36)(23, 24)(25, 26)(29, 30), (1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40)]) \cong C2 \times C2$
- $P_6 = Group([(1, 4)(2, 7)(3, 9)(5, 35)(6, 13)(8, 38)(10, 39)(11, 28)(12, 27)(14, 40)(15, 32)(16, 31)(17, 34)(18, 33)(19, 20)(21, 37)(22, 36)(23, 24)(25, 26)(29, 30), (1, 2, 4, 7)(3, 6, 9, 13)(5, 16, 35, 31)(8, 19, 38, 20)(10, 22, 39, 36)(11, 23, 28, 24)(12, 32, 27, 15)(14, 25, 40, 26)(17, 29, 34, 30)(18, 37, 33, 21)]) \cong C4$
- $P_7 = Group([(1, 4)(2, 7)(3, 9)(5, 35)(6, 13)(8, 38)(10, 39)(11, 28)(12, 27)(14, 40)(15, 32)(16, 31)(17, 34)(18, 33)(19, 20)(21, 37)(22, 36)(23, 24)(25, 26)(29, 30), (1, 6, 4, 13)(2, 9, 7, 3)(5, 22, 35, 36)(8, 25, 38, 26)(10, 16, 39, 31)(11, 29, 28, 30)(12, 37, 27, 21)(14, 19, 40, 20)(15, 18, 32, 33)(17, 23, 34, 24)]) \cong C4$
- $P_8 = Group([(1, 4)(2, 7)(3, 9)(5, 35)(6, 13)(8, 38)(10, 39)(11, 28)(12, 27)(14, 40)(15, 32)(16, 31)(17, 34)(18, 33)(19, 20)(21, 37)(22, 36)(23, 24)(25, 26)(29, 30), (1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40), (1, 2, 4, 7)(3, 6, 9, 13)(5, 16, 35, 31)(8, 19, 38, 20)(10, 22, 39, 36)(11, 23, 28, 24)(12, 32, 27, 15)(14, 25, 40, 26)(17, 29, 34, 30)(18, 37, 33, 21)]) \cong C4 \times C2$

- $N_1 = Group([(1, 2, 4, 7)(3, 6, 9, 13)(5, 16, 35, 31)(8, 19, 38, 20)(10, 22, 39, 36)(11, 23, 28, 24)(12, 32, 27, 15)(14, 25, 40, 26)(17, 29, 34, 30)(18, 37, 33, 21), (1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40), (1, 4)(2, 7)(3, 9)(5, 35)(6, 13)(8, 38)(10, 39)(11, 28)(12, 27)(14, 40)(15, 32)(16, 31)(17, 34)(18, 33)(19, 20)(21, 37)(22, 36)(23, 24)(25, 26)(29, 30), (1, 5, 12, 20, 28)(2, 8, 16, 24, 32)(3, 10, 18, 26, 34)(4, 11, 19, 27, 35)(6, 14, 22, 30, 37)(7, 15, 23, 31, 38)(9, 17, 25, 33, 39)(13, 21, 29, 36, 40)]) \cong C2 \times (C5 : C4)$
- $N_2 = Group([(1, 4)(2, 7)(3, 9)(5, 35)(6, 13)(8, 38)(10, 39)(11, 28)(12, 27)(14, 40)(15, 32)(16, 31)(17, 34)(18, 33)(19, 20)(21, 37)(22, 36)(23, 24)(25, 26)(29, 30), (1, 2, 4, 7)(3, 6, 9, 13)(5, 16, 35, 31)(8, 19, 38, 20)(10, 22, 39, 36)(11, 23, 28, 24)(12, 32, 27, 15)(14, 25, 40, 26)(17, 29, 34, 30)(18, 37, 33, 21), (1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40)]) \cong C4 \times C2$
- $N_3 = Group([(1, 2, 4, 7)(3, 6, 9, 13)(5, 16, 35, 31)(8, 19, 38, 20)(10, 22, 39, 36)(11, 23, 28, 24)(12, 32, 27, 15)(14, 25, 40, 26)(17, 29, 34, 30)(18, 37, 33, 21), (1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40), (1, 4)(2, 7)(3, 9)(5, 35)(6, 13)(8, 38)(10, 39)(11, 28)(12, 27)(14, 40)(15, 32)(16, 31)(17, 34)(18, 33)(19, 20)(21, 37)(22, 36)(23, 24)(25, 26)(29, 30), (1, 5, 12, 20, 28)(2, 8, 16, 24, 32)(3, 10, 18, 26, 34)(4, 11, 19, 27, 35)(6, 14, 22, 30, 37)(7, 15, 23, 31, 38)(9, 17, 25, 33, 39)(13, 21, 29, 36, 40)]) \cong C2 \times (C5 : C4)$
- $N_4 = Group([(1, 9)(2, 13)(3, 4)(5, 39)(6, 7)(8, 40)(10, 35)(11, 34)(12, 33)(14, 38)(15, 37)(16, 36)(17, 28)(18, 27)(19, 26)(20, 25)(21, 32)(22, 31)(23, 30)(24, 29), (1, 2, 4, 7)(3, 6, 9, 13)(5, 16, 35, 31)(8, 19, 38, 20)(10, 22, 39, 36)(11, 23, 28, 24)(12, 32, 27, 15)(14, 25, 40, 26)(17, 29, 34, 30)(18, 37, 33, 21), (1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40), (1, 4)(2, 7)(3, 9)(5, 35)(6, 13)(8, 38)(10, 39)(11, 28)(12, 27)(14, 40)(15, 32)(16, 31)(17, 34)(18, 33)(19, 20)(21, 37)(22, 36)(23, 24)(25, 26)(29, 30)]) \cong C4 \times C2$
- $N_5 = Group([(1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40), (1, 4)(2, 7)(3, 9)(5, 35)(6, 13)(8, 38)(10, 39)(11, 28)(12, 27)(14, 40)(15, 32)(16, 31)(17, 34)(18, 33)(19, 20)(21, 37)(22, 36)(23, 24)(25, 26)(29, 30), (1, 2, 4, 7)(3, 6, 9, 13)(5, 16, 35, 31)(8, 19, 38, 20)(10, 22, 39, 36)(11, 23, 28, 24)(12, 32, 27, 15)(14, 25, 40, 26)(17, 29, 34, 30)(18, 37, 33, 21)]) \cong C4 \times C2$
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